

Dactylis glomerata Linn. *Sp. Pl.* 71. (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), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Europe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Habitat in Virginia, Canada, Lusitania. LT: *Anon.*, (LINN-90.3). LT designated by Clayton, Fl. Trop. E. Africa Gramineae (1): 43 (1970).

Recent Synonyms: *Dactylis polygama* L., *Sp. Pl.* 71. (1753).

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (216), R.M.Phill, F.T.E.A., *Gramineae* (1(1970):44, Fig.16), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (49, Fig. 18), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (99, Fig. 57), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 327), L.Boulos, *Flora of Egypt* 4 (2005) (147, Fig. 41), N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (77, Pl. 26 as subsp. *hispanica*), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (105, Fig. 30), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (310), C-C Hsu, *Taiwan Grasses* (1975), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (531, Fig. 58 as subsp. *himalayensis*), K.M.Matthew, *Flora Palni Hills* (1996) (810, Pl. 810), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (437, Fig. 46), H.J.Noltie, *The Grasses of Bhutan* (2000) (575, Fig. 21), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (122, Fig. 79), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (105, Pl. 30), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (437, Fig 85), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (176), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (115, Fig. 18), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (341, Fig. 45), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1518, Pl. 223), K.F.Best, et al, *Prairie Grasses* (1971) (97), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (483), F.W.Gould, *The Grasses of Texas* (1975) (125, Fig. 61), S.A.Renvoize, *Gramineas de Bolivia* (1998) (127, Fig. 31), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (312, Fig. 105), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (228 & 229, Fig. 50 & 51), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (116, Fig. 36), W.Burger, *Flora Costaricensis* 15, *Gramineae: Fieldiana Botany New Series* 4 (1980) (166, Fig. 53), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (103, Fig. 26), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (137, Fig. 85), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (114, Fig. 41), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Fig. 360), H.M. Longhi-Wagner, *Flora Illustrada do Rio Grande do Sul, Gramineae, Poaceae* (1987).

Illustrations (Journals): *Ruizia* (13:138, Fig14d-e (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, L.Boulos, *Flora of Egypt* 4 (2005);, R.Darke, *The Encyclopaedia of Grasses for Liveable Landscapes* (2007);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): *L. glomus*, ball of thread; -ata, possessing. Spikelets crowded and forming clusters in the inflorescence.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations flabellate. Culms erect or geniculately ascending, 15–140 cm long. Leaf-sheaths keeled. Ligule an eciliate membrane. Leaf-blades conduplicate, 10–45 cm long, 2–14 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, ovate, interrupted, secund, 2–30 cm long, gathered into fascicles. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, compressed strongly, 5–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Fertile lemma obovate, laterally compressed, lanceolate in profile or oblong in profile, 4–7 mm long, herbaceous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma midvein pectinately

ciliate. Lemma lateral veins convergent above, extending close to apex. Lemma apex acuminate, awned, 1 - awned. Principal lemma awn 0.5–1.5 mm long overall. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Ovary glabrous. Hilum punctiform.

$2n = 14$ (1 ref TROPICOS), or 28 (11 refs TROPICOS).

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

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

Country /Province /State. : Denmark, Finland, Foroyar, Great Britain, Iceland, Ireland, Northern Ireland, Norway, Sweden. : Austria, Liechtenstein, Belgium, Luxembourg, Czechoslovakia, Germany, Hungary, Netherlands, Poland, Switzerland. : Balears, Corsica, Channel Islands, France, Monaco, Portugal, Sardinia, Andorra, Gibraltar, Spain, Azores. : Albania, Bulgaria, Greece, Italy, San Marino, Vatican, Crete, Romania, Malta, Sicily, Turkey Europe, Yugoslavia. Belarus, Estonia, Kaliningrad, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Moldova, Ukraine. **Northern Africa, Macaronesia, Northeast tropical Africa, East tropical Africa, Southern Africa** (*), **Middle Atlantic ocean.** Algeria, Egypt (*), Libya, Morocco, Tunisia. Azores, Canary Is, Cape Verde, Madeira. Ethiopia (inc. Eritrea). Tanzania. Mpumalanga, Free State, Kwazulu-Natal, Lesotho, Western Cape, Eastern Cape. Siberia, Russian far east, **Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China, Mongolia, Eastern Asia, Russia.** Altay, Irkutsk, Krasnoyarsk, Tuva. Kamchatka, Kuril Is, Primorye, Sakhalin. Kazakhstan, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan. North Caucasus, Transcaucasus. Afghanistan, Iran, Iraq. China South Central, Inner Mongolia, China North-Central, China Southeast, Tibet, Xinjiang. Mongolia. Japan, Nansei-Shoto, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Malesia.** Assam, Eastern Himalaya, India, Nepal, Pakistan, Sri Lanka, West Himalaya. Java. **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, Stewart Is, Campbell Is. **North-central Pacific.** Fiji (*). Marquesas (*). Hawaii (*). **Subarctic America, Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Aleutian Is, Alaska, Greenland, Northwest Territories, Yukon. Alberta, British Columbia, Manitoba, Saskatchewan. New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward I, 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. Alabama, Arkansas, Delaware, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, Guatemala, Nicaragua. Jamaica. Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil South. Argentina Northeast, Argentina South, Chile Central, Chile South, Juan Fernandez Is, Paraguay, Uruguay. **Subantarctic islands.** Falkland Is (Malvinas).

TDWG4. Gansu, Hebei (+), Shaanxi, Shandong (+). Henan (+), Jiangsu (+), Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. South-West. Southern. South East. Coast, Tablelands, Western Slopes. Mendoza, Tucuman. Buenos Aires, Cordoba, Entre Rios, La Pampa, Santa Fe. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania. Los Lagos, Aisen, Magallanes. Distrito Federal, Mexico State, Puebla. Coahuila, Chihuahua, Neuvo Leon, Queretaro. Veracruz. Michoacan, Oaxaca. Chiapas.

Dactyloctenium aegyptium (L.) Willd. *Enum. Hort. Berol.* 1029 (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), 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.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 Egypt & India. **Basionym or Replaced Name:** *Cynosurus aegyptius* L., *Sp. Pl.* 1: 72 (1753). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Habitat in Africa, Asia, America. LT: *van Royen s.n.*, (L).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (201, Fig. 125), F.N.Hepper, *F.W.T.A.* 3(2) (1972) (390, Fig.431), G.V.Pope et al., *Flora Zambesiaca* 10 (2(1999):164 t. 49),

L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (132, Fig. 104), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 382), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (136, Fig. 56), L.Boulos, *Flora of Egypt* 4 (2005) (266, Pl. 79), N.L.Bor, *Gramineae* in K.H.Rechinger, *Flora Iranica*. No. 70/30 (1970) (Tab. 62), N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (427, Pl. 161), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (270, Fig. 102), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (384), C-C Hsu, *Taiwan Grasses* (1975) (472, Pl. 1399), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (490, Fig. 54), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pls. 841 & 842), H.J.Noltie, *The Grasses of Bhutan* (2000) (669, Fig. 35), H.B.Gilliland, *Grasses of Malaya* (1971) (82, Fig 11), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (47, Fig. 38), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (58, Pl. 18), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (195), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (179, Fig. 27), *Flora of Australia Oceanic Islands Poaceae* 50(1993) & 49(1994) (50:473 Fig.90 (1993)), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (317, Fig. 55), 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) (1523, Pl. 224), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (114), F.W.Gould, *The Grasses of Texas* (1975) (224, Fig. 116), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (115, Fig. 73), S.A.Rennoize, *Gramineas de Bolivia* (1998) (329, Fig. 69), S.A.Rennoize, *The Grasses of Bahia*, 1984 (77, Fig. 27), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (81, Fig. 52), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (367, Fig. 126), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (357, Fig. 83 & 375, Fig. 86), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (168, Fig. 54), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 57, Fig. 7 (2001)), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (163 Fig. 28), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Fig. 683), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:56(1980)).

Illustrations (Journals): *Ruizia* (13:280, Fig 33a-b (1993)).

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

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, mat forming or caespitose. Stolons present. Culms geniculately ascending or decumbent, 5–70 cm long, rooting from lower nodes. Ligule a ciliolate membrane or a ciliate membrane. Leaf-blades 3–25 cm long, 2.5–7.5 mm wide. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, digitate, spreading or ascending, unilateral, 1.2–6.5 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1.5–2.2 mm long, 1 length of upper glume, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.5–2.2 mm long, 0.5–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex obtuse, awned, 1 -awned, awn subapical, awn 0.8–4 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma gibbous, ovate in profile, 2.6–4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins obscure. Lemma apex acute or cuspidate, muticous or mucronate. Palea 1 length of lemma, 2 -veined. Palea keels wingless or winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.25–0.8 mm long. Caryopsis with free soft pericarp, obovoid, 1 mm long, rugose.

$N = 20$ (1 ref TROPICOS), or 21 (1 ref TROPICOS), or 23 (2 refs TROPICOS). $2n = 42$ (1 ref TROPICOS).

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

Region. Northern Europe (*), Southeastern Europe.

Country /Province /State. : GB Aliens (Ryves et al). : Italy, Crete, Sicily. **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.** Algeria, Egypt, Tunisia. Cape Verde, Madeira. Benin, Burkina, Gambia, Ghana, Guinea-Bissau, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Nigeria, Senegal, Sierre Leone, Togo, Niger. Burundi, Central African Republic, Equatorial Guinea, Annobon, Principe & Sao Tome, Rwanda, DRC. Djibouti, Eritrea, Ethiopia (inc. Eritrea), Socotra, 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. Ascension, St Helena. Mauritius, Madagascar, Seychelles. **Western Asia, Arabian Peninsula, China, Eastern Asia.** Iran, Iraq. Gulf States, Kuwait, Oman. China South Central, Hainan, China Southeast. Kazanretto, Nansei-Shoto, Ogosawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Assam, Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka, West Himalaya. Andaman Is, Cambodia, Myanmar, Thailand, Vietnam. Borneo, Cocos (Keeling) Is, Java, Lesser Sunda Is, Malaya, Singapore, Moluccas, Philippines, Sulawesi, Sumatra, Christmas I. New Guinea PNG, or West Papua (Irian Jaya). New Guinea, Solomon Is. **Australia.** Western Australia (*), Northern Territory (*), South Australia (*), Queensland (*), New South Wales (*). **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), Gilbert Is, Nauru, Niue (*), New Caledonia (*), Samoa (*), Tonga (*), Tuvalu, Wallis-Futuna Is (*). Cook Is, Line Is, Marquesas, Society Is, Tuamotu Is, Tubuai Is. Caroline Is, Marcus Is, Marianas, Marshall Is. Hawaii (*). **North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Illinois, Missouri. Massachusetts. Arizona, California. New Mexico, Texas. Alabama, Florida, Georgia, Louisiana, 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. Aruba, Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago, Venezuelan and Netherlands Antilles. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast. Argentina Northwest, Argentina Northeast, Uruguay.

TDWG4. Fujian, Guangdong, Zhejiang. Guizhou, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. Tripura. Bihar, Delhi, Daman, Goa, Gujarat, Karnataka, Kerala. Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamilnadu, Uttah Pradesh, West Bengal. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. Southern. North, Central, South East, Inland. Coast. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Chaco, Cordoba, Formosa, La Pampa. Distrito Federal, Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Veracruz. Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Dactyloctenium aristatum Link. *Hort. Berol.* 1: 59 (1827).

Accepted by: R.J.Soreng et al., *Catalogue of 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 Egypt. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. in Aegypto, *Eherenb. s.n.* .

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (136, Fig 56), L.Boulos, *Flora of Egypt* 4 (2005) (266, Pl. 79).

Derivation (Clifford & Bostock 2007): L. arista, bristle; -ata, possessing. The apices of lemmas, paleas or glumes drawn out into a distinct awn.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 4–38 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 1–13 cm long, 1.5–7 mm wide. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)4–7(–11), digitate, in a head, oblong, unilateral, 0.8–1.8 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4.1–5.2 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume oblong, 1.7–2.3 mm long, 1 length of upper glume, 1-keeled, wingless or winged on keel, winged narrowly, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.7–2.3 mm long, 0.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex truncate, awned, 1 -awned, awn subapical, awn 1–2.3 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma gibbous, lanceolate in profile or ovate in profile, (3–)3.3–4.3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins obscure. Lemma apex acuminate, mucronate (0.5–1mm). Palea 1 length of lemma, 2 -veined. Palea keels winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.3–0.5 mm long. Caryopsis with free soft pericarp, ellipsoid or obovoid, 0.75–1.1 mm long, granular.

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

Country /Province /State. Northern Africa, Northeast tropical Africa, East tropical Africa. Egypt. Eritrea, Socotra, Somalia, Sudan. Kenya. Western Asia, Arabian Peninsula. Iran. Kuwait, Oman. Indian Subcontinent. Pakistan. Mexico. Southeast Mexico.

TDWG4. Uttah Pradesh. Yucatan.

Dactyloctenium australe Steud. *Syn. Pl. Gram.* 212 (1854).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from South Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: South Africa, *Drege*; holotype: P.

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (351, Fig 283), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (195), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004).

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*; F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. of the south. From the south in general as from Africa, America, Europe or elsewhere.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming or caespitose. Stolons present. Culms geniculately ascending or decumbent, 32–80 cm long, rooting from lower nodes. Ligule a ciliolate membrane. Leaf-blades 5–27 cm long, 2.5–4.5 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (3–)4–5(–6), digitate, ascending, linear or oblong, unilateral, 3.2–5 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume oblong, 1.75 mm long, 1 length of upper glume, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate, mucronate (0.5–0.75mm). Upper glume obovate, 1.7–1.9 mm long, 0.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex truncate, awned, 1 -awned, awn subapical, awn 2.2–3.3 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma lanceolate in profile or ovate in profile, 2.8–4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma lateral veins obscure. Lemma apex setaceously acuminate, mucronate (0.5–0.7mm). Palea 1 length of lemma, 2 -veined. Palea keels wingless. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.3–1.7 mm long. Caryopsis with free soft pericarp.

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

Country /Province /State. Macaronesia, East tropical Africa, Southern Africa, Western Indian ocean. Madeira. Kenya, Tanzania. Limpopo, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape.

Madagascar. **Indian Subcontinent.** India. **Australia.** Western Australia (*), Queensland (*), New South Wales (*). New Caledonia (*). **Northeast USA, Southeastern USA.** Massachusetts. South Carolina.

TDWG4. North, Central, South East. Coast.

Dactyloctenium buchananense B.K.Simon. *Flora of Australia* 44B:459 (2005).

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

TYPE from Australia, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Queensland, Lake Buchanan: Kemp 3365H & Knutt (BRI holo, K, MEL, NSW).

Illustrations (Books): K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (420, Fig 75).

Derivation (Clifford & Bostock 2007): L. *-ensis*, denoting origin. Growing on the shores of Lake Buchanan, Queensland, Australia.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 8–40 cm long. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 4–8 cm long, 3–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 8–12, digitate, closely spaced, in a head, unilateral, 0.4–0.6 cm long, 2.5–3.5 mm wide. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension subulate, extension 0–2 mm long. Spikelet packing broadside to rhachis, crowded, regular, 2-rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 2.5–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume apex acute. Upper glume oblong, 2.5–3 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 0.3–0.7 mm long.

Florets. Fertile lemma ovate, 2–3.2 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins more or less parallel. Lemma apex acute, mucicous. Palea with flaps as wide as body. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.8–1 mm long, yellow. Caryopsis ellipsoid or oblong, obtuse or acute.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. Central.

Dactyloctenium capitatum A. Camus. *Not. Syst., ed. Humbert*, 7: 154 (1946).

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: *H. Humbert & C.F. Swingle* 5432, 24–28 Aug 1928, Madagascar (US-2305031).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (173, Fig 59).

Derivation (Clifford & Bostock 2007): L. *caput*, head; *-ata*, possessing. Inflorescence condensed to a sphere-like structure.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Stolons absent or present. Culms geniculately ascending or decumbent, (3–)10–18 cm long, rooting from lower nodes. Ligule a ciliolate membrane. Leaf-blades 2–4 cm long, 2.5–4.5 mm wide. Leaf-blade surface pilose, densely hairy, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, digitate, closely spaced, in a head, oblong, incurved, unilateral, 0.8–1.4 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension subulate, extension 1.5–2 mm long. Spikelet packing broadside to rhachis, crowded, regular, 2-rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1.5–2.2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute.

Upper glume oblong, 2 mm long, 0.6–0.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 0.8–1.5 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma 2.5–3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma apex acuminate. Palea 1 length of lemma, 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Caryopsis with free soft pericarp, orbicular, laterally compressed, granular, obtuse.

Distribution (TDWG). Continent. Africa.

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

Dactyloctenium ctenoides (Steud.) Bosser. *Adansonia, n. s.*, 8: 516 (1968).

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

TYPE from Madagascar. **Basionym or Replaced Name:** *Chloris ctenoides* Steud. *Syn. Pl. Glumac.* 1: 423 (1885). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Madagascar: Boivin 2287 (P holo).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (173, Fig 59).

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, mat forming. Culms decumbent or prostrate, 20–50 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 3.7–13 cm long, 3.5–7.5 mm wide. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (4–)5–6(–7), digitate, spreading or ascending, oblong, unilateral, 1.4–3.3 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4–4.2 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Spikelet callus glabrous or pubescent.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume oblong, 2–2.2 mm long, 1.1–1.2 length of upper glume, 1-keeled, winged on keel, winged narrowly, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.7–2 mm long, 0.5–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex truncate, awned, 1 -awned, awn subapical, awn 0.7–1.5 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma gibbous, ovate in profile, 2.8–3.4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins obscure. Lemma apex cuspidate, muticous. Palea 1 length of lemma, 2 -veined. Palea keels wingless or winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.4–0.6 mm long. Caryopsis with free soft pericarp, obovoid, 0.7–0.8 mm long, granular.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Western Indian ocean. Kenya, Tanzania. Mozambique. Aldabra, Mauritius, Madagascar, Reunion, Seychelles.

Dactyloctenium geminatum Hack. *Bull. Herb. Boiss.* 7: 26 (1899).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, 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: IT: *Junod 231*, 1890, Mozambique (US-81794).

Recent Synonyms: *Dactyloctenium bogdanii* S.M. Phillips, *Kew Bull.*, 29(2): 268 (1974).

Illustrations (Books): R.M.Pollhill, F.T.E.A., *Gramineae* (2(1974):257, Fig.70), G.V.Pope et al., *Flora Zambesiaca* 10, T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (190, Fig 102), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

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

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms geniculately ascending, 35–112 cm long, rooting from lower nodes. Ligule a ciliolate membrane. Leaf-blades 4–25 cm long, 3–6 mm wide, glaucous. Leaf-blade margins glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2(–3), single or paired or digitate, ascending, straight or arcuate, unilateral, 3–7 cm long. Rhachis deciduous from axis, flattened, smooth on margins, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3–5.3 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume elliptic or ovate, 1.3–1.8 mm long, 1 length of upper glume, 1-keeled, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic or ovate, 1.3–1.8 mm long, 0.4–0.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex truncate, awned, 1 -awned, awn subapical, awn 2–3 mm long.

Florets. Fertile florets appressed to rhachilla. Fertile lemma lanceolate in profile, 3–3.8 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness. Lemma lateral veins obscure. Lemma apex acute, mucronate. Palea 1 length of lemma, 2 -veined. Palea keels wingless, scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.1–1.7 mm long. Caryopsis with free soft pericarp, obovoid, 1 mm long, rugose.

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

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Ethiopia (inc. Eritrea), Somalia. Kenya, Tanzania. Malawi, Mozambique, Zimbabwe. Limpopo, Mpumalanga, Kwazulu-Natal. Madagascar. Southeastern USA, Mexico. Maryland. Southwest Mexico, Southeast Mexico.

Guerrero. Campeche, Quintana Roo.

Dactyloctenium giganteum B. S. Fisher & Schweickerdt. *Ann. Natal Mus.* 10: 53 (1941).

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: NAMIBIA: Grootfontein, *Schoenfeldter 1018* (HT: NH).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (2(1999):164 t. 49), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (100, Fig 58).

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. very large. Culms tall compared with those of related species.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending or decumbent, (37–)70–160 cm long, without nodal roots or rooting from lower nodes. Ligule a ciliolate membrane. Leaf-blades 11–45 cm long, 5–12 mm wide. Leaf-blade margins glabrous or tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)3–9, digitate, ascending, unilateral, 3.5–11 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–6.2 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate or elliptic, 1.5–2.2 mm long, 1 length of upper glume, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.5–2.2 mm long, 0.5–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex truncate, awned, 1 -awned, awn subapical, awn 3–9 mm long.

Florets. Fertile florets appressed to rhachilla. Fertile lemma not gibbous, lanceolate in profile, 3–4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins obscure.

Lemma apex acute or cuspidate, mucronate or awned, 1 -awned. Principal lemma awn 0.7–2 mm long overall. Palea 1 length of lemma, 2 -veined. Palea keels wingless. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.3–2.1 mm long. Caryopsis with free soft pericarp, obovoid, 0.7–1.1 mm long, rugose.

Distribution (TDWG). Continent. Africa, Australasia.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape. Madagascar. **Australia.** Queensland.

TDWG4. Central, Inland.

Dactyloctenium hackelii Wagn. & Vierh. ex Vierh. *Oesterr. Bot. Zeitschr.* 1903, 434 (1903).

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

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sokotra, Gubbet: Paulay.

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

Derivation (Clifford & Bostock 2007): in honor of Eduard Hackel (1850–1926) Bohemian-born Austrian botanist with special interest in the grasses.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms 5–15 cm long. Leaves distichous. Ligule a ciliolate membrane. Leaf-blades 1–7 cm long, 2–5 mm wide, coriaceous, stiff. Leaf-blade apex pungent.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, digitate, closely spaced, in a head, oblong, unilateral, 1 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 6 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, exceeding apex of florets or reaching apex of florets, recurved at apex. Lower glume lanceolate, 3–3.5 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 3.7–5 mm long, 0.8–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 1 mm long.

Florets. Fertile lemma ovate, lanceolate in profile, 4.5–5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma apex acute, mucronate. Palea 1 length of lemma, 2 -veined. Palea keels winged, narrowly winged, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 2.5 mm long. Caryopsis with free soft pericarp.

Distribution (TDWG). Continent. Africa.

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

Dactyloctenium pilosum Stapf. *Kew Bull.* , 135 (1919).

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

TYPE from Seychelles, Assumption Island. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Seychelles: Dupont 30 (K syn) ; Assumption: Dupont 254 (K syn) ; Aldabra: Dupont 70 (K syn).

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

Derivation (Clifford & Bostock 2007): *L. pilus*, a hair; -osa, abundance. The whole plant or any of its organs invested with long spreading hairs.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 9–18 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 1.5–6.5 cm long, 2–4 mm wide. Leaf-blade surface glabrous or pilose, hairy on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2, paired, spreading, linear or oblong, straight or arcuate, unilateral, 1.4–3.5 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.3–4 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Spikelet callus pilose.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume oblong, 2–2.5 mm long, 1.1–1.3 length of upper glume, 1-keeled, winged on keel, winged narrowly, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.5–2.2 mm long, 0.5–0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume apex truncate, mucronate or awned, 1 -awned, awn subapical, awn 0–1 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma gibbous, ovate in profile, 2.2–3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins obscure. Lemma apex acute, mucronate (0.5mm). Palea 1 length of lemma, 2 -veined. Palea keels wingless. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.6–0.75 mm long. Caryopsis with free soft pericarp, obovoid, 0.7 mm long, granular.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, Western Indian ocean. Kenya. Aldabra, Madagascar, Seychelles.

Dactyloctenium radulans (R.Br.) Beauv. *Agrost.* 72 (1812).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Eleusine radulans* R. Br., *Prodr.* 186 (1812). 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) (352, Fig. 284), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (209, Pl. 62), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1137, Fig. 328), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (570, Fig. 114), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (194), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (178), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (314, Fig. 54), 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*;, K.Domin, *Bibliotheca Botanica* 85 (1915) (377, Fig.89).

Derivation (Clifford & Bostock 2007): *L. radula*, scraper; -ans, assuming the form of. Leaf-blades scabrid.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual. Culms decumbent, 8–40 cm long. Culm-internodes striate, smooth, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths loose, keeled, striately veined, glabrous on surface. Ligule a ciliolate membrane. Leaf-blades tapering towards tip, 4–8 cm long, 3–4 mm wide. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, digitate, closely spaced, in a head, erect or ascending, unilateral, 0.5–1 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension subulate. Spikelet packing broadside to rachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 2 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 2.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent. Upper glume apex acute, awned, 1 -awned, awn 1–1.5 mm long.

Florets. Fertile florets appressed to rachilla. Fertile lemma 2.5 mm long, membranous, keeled, 1 -veined, 0–3 -veined, one-veined. Lemma midvein scaberulous. Lemma apex acute, awned, 1 -awned. Principal lemma awn 0.5 mm long overall. Palea 1 length of lemma, 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.5 mm long. Caryopsis with free soft pericarp.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria. **Northeast USA, Southwestern USA, Southeastern USA.** Massachusetts. Arizona. Maryland.

TDWG4. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Dactyloctenium robecchii (Chiov.) Chiov. *Fl. Somalia*, 337 (1929).

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, Wadi Daremo: Robecchi-Bricchetti.

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

Derivation (Clifford & Bostock 2007): In honor of Luigi Robecchi-Bricchetti (1855–1926) Italian botanist who worked in Somalia.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms 15–30 cm long. Lateral branches suffrutescent. Leaves distichous. Ligule a ciliolate membrane. Leaf-blades 0.5–2 cm long, 1–2 mm wide, coriaceous, stiff. Leaf-blade apex pungent.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)3–4(–5), digitate, closely spaced, in a head, oblong, unilateral, 0.8–2 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.8–4.2 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, recurved at apex. Lower glume ovate, 1–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1–2.5 mm long, 0.4–0.6 length of adjacent fertile lemma, membranous, 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 ovate, elliptic in profile, 2.4–4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma apex acute, mucicous or mucronate. Palea 1 length of lemma, 2 -veined. Palea keels winged, narrowly winged, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.2–1.4 mm long. Caryopsis with free soft pericarp, granular.

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

Country /Province /State. **Northeast tropical Africa.** Socotra, Somalia. **Arabian Peninsula.** Oman.

Dactyloctenium scindicum Boiss. *Diagn. Ser.* 2, 4: 131 (1859).

Accepted by: R.J.Soreng et al., *Catalogue of 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 Pakistan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. in ditone Scinde, *Griffith* 637.

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (136, Fig 56), L.Boulos, *Flora of Egypt* 4 (2005) (266, Pl. 79).

Derivation (Clifford & Bostock 2007): L. -icum, belonging to. From Scinde, now Sind, Province of Pakistan.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Butt sheaths thickened and forming a bulb. Culms erect, 7–45 cm long. Ligule a ciliolate membrane. Leaf-blades flat or conduplicate, 1–11 cm long, 1.5–3 mm wide, glaucous. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4(–5), digitate, in a head, oblong, incurved, unilateral, 0.8–2 cm long. Rhachis deciduous from axis, flattened, terminating in a barren extension, extension

bristle-like. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets pectinate, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or ovate, laterally compressed, 4–8 mm long, breaking up at maturity, disarticulating above glumes but not between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume elliptic, 1.7–2.5 mm long, 1.1 length of upper glume, 1-keeled, winged on keel, winged narrowly, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.5–2.3 mm long, 0.5–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex obtuse, awned, 1 -awned, awn subapical, awn 1–2.3 mm long.

Florets. Fertile florets appressed to rhachilla. Fertile lemma lanceolate in profile, 3–3.8 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma lateral veins obscure. Lemma apex acute, mucronate (to 0.8mm). Palea 1 length of lemma, 2 -veined. Palea keels wingless, scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.1–2 mm long. Caryopsis with free soft pericarp, obovoid, 0.7–1 mm long, rugose.

N = 10 (2 refs TROPICOS).

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

Country /Province /State. Northern Africa, Northeast tropical Africa, East tropical Africa. Egypt. Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania. **Western Asia, Arabian Peninsula.** Afghanistan. Gulf States, Oman, Saudi Arabia. **Indian Subcontinent.** India, Pakistan. **Mexico.** Northwest Mexico, Southeast Mexico.

TDWG4. Gujarat. Madhya Pradesh, Rajasthan. Baja California Sur. Yucatan.

Daknopholis boivinii (A. Camus) W.D.Clayton. *Bull. Soc. Bot. France*, 79 : 845 (1933).

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

TYPE from Madagascar. **Basionym or Replaced Name:** *Chloris boivonii* A.Camus. *Bull. Soc. Bot. France*, 79 : 845 (1933). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Port Lewen: Boivin 2288 (P holotype).

Illustrations (Books): R.M.Phill, F.T.E.A., *Gramineae* (2(1974):322, Fig.90, as *Daknopholis*), G.V.Pope et al., *Flora Zambesiaca* 10 (2(1974):322, Fig.90, as *Daknopholis*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (81, Fig 20).

Derivation (Clifford & Bostock 2007): In honor of Louis Hyacinthe Boivin (1808–1852) French botanist and traveller.

Classification. Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.

Habit, Vegetative Morphology. Annual, mat forming. Stolons present. Basal innovations flabellate. Culms geniculately ascending, 10–30 cm long. Ligule a fringe of hairs. Leaf-blades 1–3.5 cm long, 2–5 mm wide. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–4(–6), digitate, unilateral, 2.5–6 cm long. Rhachis flattened. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed strongly, 1.5–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2 mm long, pubescent.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–1.3 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume oblong, 0.5–1.3 mm long, 0.3–0.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex erose, truncate or acute.

Florets. Fertile lemma ovate, laterally compressed, lanceolate in profile, 1.5–2.5 mm long, cartilaginous, keeled, 3 -veined, 0–3 -veined. Lemma apex dentate, 2 -fid, muticous (rarely) or awned, 1 -awned. Principal lemma awn from a sinus, 3–12 mm long overall. Palea 2 -veined. Palea keels approximate. Rhachilla extension 0.1 length of fertile floret.

Flower and Fruit. Anthers 3, 0.5 mm long. Caryopsis with tardily free pericarp, fusiform, laterally compressed, trigonous, 1.7 mm long.

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

Country /Province /State. East tropical Africa, South tropical Africa, Western Indian ocean. Kenya, Tanzania. Mozambique. Aldabra, Madagascar, Seychelles. **Indo-China.** Andaman Is, Nicobar Is.

Dallwatsonia felliana B.K. Simon. *Austrobaileya*, 3(4): 678 (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, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Queensland: Cook Dist.: Rokeby National Park, Langi Lagoon, 25 km N of Ranger Station, 13.27S 142.41E, 30 Apr 1991, fringe and bank of a permanent freshwater lagoon, an occasional grass to 1 m growing in 10 cm of water, *D.G. Fell 2295* (HT: BRI-AQ540192; IT: CANB, K).

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

Illustrations (Journals): *Austrobaileya* 3(4): 679, Fig.5 (1992).

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

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of David Gregory Fell (1962-) Australian botanist.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 70–130 cm long, 7-noded. Lateral branches sparse. Leaf-sheaths mostly shorter than adjacent culm internode, keeled. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 15–30 cm long, 3.5–7 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–22 cm long, contracted about primary branches. Primary panicle branches spreading, 3–6 cm long, bearing 20–35 fertile spikelets on each lower branch. Panicle branches scaberulous. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, terete, 0.1–4 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, 1.5 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes thinner than fertile lemma. Lower glume ovate, 1–1.5 mm long, 0.25–0.4 length of spikelet, membranous, 5-veined. Lower glume apex acute. Upper glume lanceolate, 3.5 mm long, 1 length of spikelet, membranous, without keels, 6–7-veined. Upper glume apex laterally pinched.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 3.5 mm long, 1 length of spikelet, membranous, laterally pinched at apex. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma lanceolate, dorsally compressed, 3.5 mm long, membranous, pallid, without keel. Lemma margins flat. Lemma apex acute. Palea gaping.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North.

Danthonia alpina Vest. *Flora*, 4: 145 (1821).

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), N.Tsvelev, *Grasses of the Soviet Union* (1983).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Habitat in alpe Carinthiae Kotschna,.

Illustrations (Books): G.Hegi, *Flora von Mitteleuropa* 1 (1909) (as *D. calycina*).

Derivation (Clifford & Bostock 2007): L. alpes, high mountain; -ina, belonging to. Species growing at high altitudes.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms (10–)30–60(–70) cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades convolute, 3–15 cm long, 1–2.5 mm wide.

Inflorescence. Inflorescence a panicle, comprising 2–5 fertile spikelets. Panicle contracted, linear, 2–5 cm long, bearing few spikelets. Primary panicle branches simple. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–20 mm long, 1 length of upper glume, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–20 mm long, 2–3 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 5–7 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliolate. Lemma apex lobed, 2 -fid, incised 0.25–0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–10 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2 mm long, shorter than principal. Palea 1 length of lemma, 2 -veined. Palea keels winged, narrowly winged, ciliolate. Apical sterile florets 1 in number, barren, rudimentary (awn-like).

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

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

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

Country /Province /State. : Austria, Czechoslovakia, Germany, Hungary, Switzerland. : France, Spain. : Albania, Bulgaria, Greece, Italy, Romania, Yugoslavia. Northwest European Russia, Ukraine. **Caucasus and Western Asia.** Transcaucasus. Turkey.

TDWG4.

Danthonia annableae P.M. Peterson & Z.E. Rugolo de Agrasar. *Madrono*, 40(2): 71 (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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: P.M. Peterson & C.R. Annable 11832, 21 Mar 1992, Bolivia: Potosm: approximately 18 km NW of Salo on road to Atocha, 21.10S 63 .58W (SI; IT: FR, K, LPB, MO-4387746, TAES, US-3233193).

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (261, Fig. 52).

Derivation (Clifford & Bostock 2007): in honor of Carol Ruth Annable (1953-) United States botanist.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 5–15 cm long. Ligule a fringe of hairs. Leaf-blades filiform, involute, 2–5 cm long, 0.5–1 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10–15 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume linear, 10–15 mm long, 1.7–2.5 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.33–0.4 of lemma length, acute, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 5–10 mm long overall, with twisted column. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.

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

TDWG4. Jujuy, Salta.

Danthonia araucana R. Phil. *Anal. Univ. Chil.* 94: 31 (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 Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: F. Philippi s.n., Jan 1877, Chile: Nahuelbuta, Pinales de Nahuelbuta (SGO-PHIL-257; IT: SGO-45822, SGO-37122, US-556461 (fragm. ex SGO-PHIL-257 & photo), US- (photo SGO-45822), US- (photo SGO-37122)).

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

Derivation (Clifford & Bostock 2007): in honor of the Araucana, a Chilean tribe.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial. Basal innovations intravaginal. Culms erect, 6–40 cm long, 2–4-noded. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate, 3 mm long. Ligule a fringe of hairs, 0.2–1 mm long. Leaf-blades 4–8 cm long, 1–2 mm wide. Leaf-blade surface pilose, sparsely hairy or moderately hairy.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 2–8 fertile spikelets. Peduncle glabrous. Panicle open, linear, 1.4–6.8 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–12 mm long, pubescent.

Fertile Spikelets. Spikelets comprising 4–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 12–19 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.8 mm long, glabrous. Floret callus evident, 0.7–1 mm long, pubescent or pilose. Floret callus hairs 0.3–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–14 mm long, 1 length of upper glume, membranous, much thinner on margins, mid-green or purple, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7–14 mm long, 1–1.5 length of adjacent fertile lemma, membranous, with hyaline margins, mid-green or purple, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 7–9.5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins ciliate, hairy in the middle. Lemma hairs 0.8–1.5 mm long. Lemma apex lobed, 2 -fid, with lobes 2.8–5 mm long, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–11 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 0.5–2.5 mm long, shorter than principal. Palea lanceolate, 4–5.5 mm long, 2 -veined. Palea surface pilose, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.5–0.8 mm long, fleshy, glabrous. Anthers 3, 1.5–3 mm long, retained within floret or eventually exerted. Caryopsis with adherent pericarp, ellipsoid, 1.6–2.5 mm long, light brown. Embryo 0.4 length of caryopsis. Hilum linear, 0.3 length of caryopsis.

Cleistogenes present, in upper sheaths or in lower sheaths.

$2n = 24$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central, Chile South.

Maule, Biobio, La Araucania. Los Lagos.

Danthonia boliviensis S.A. Renvoize. *Gramineas de Bolivia*: 260 (1998).

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

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bolivia: Tarija: Cercado, Cuesta de Sama, *Bastian 591* (HT: LPB).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (261, Fig. 52).

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations intravaginal. Culms erect, 15–60 cm long. Leaves mostly basal. Ligule a fringe of hairs. Leaf-blades filiform, involute, 5–15 cm long, 1 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, comprising 4–9 fertile spikelets. Peduncle pubescent above. Panicle open, oblong, 2–6 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

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 elliptic, laterally compressed, 9–16.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 9–16.5 mm long, 1 length of upper glume, membranous, without keels, 3–7 -veined. Lower glume apex acuminate. Upper glume linear, 9–16.5 mm long, 1.5–2.5 length of adjacent fertile lemma, membranous, without keels, 3–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy at base. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.5–0.6 of lemma

length, acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–8 mm long overall, with twisted column. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. South America.

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

Danthonia breviseta Hack. *Oesterr. Bot. Zeitschr.* 1902, 192 (1902).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 17361*, 1888, Brazil: Rio de Janeiro: Rio de Janeiro (W; IT: B, BAA-821 (fragm. ex B), BR, C, G, K, US-1280051, US-87193, US-1127163 (fragm.)).

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

Derivation (Clifford & Bostock 2007): *L. brevis*, short; seta, bristle. Lemmas short-awned.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes short. Basal innovations extravaginal. Culms erect, 30–70 cm long, 1–3 mm diam., 2–4 -noded, with 0.5–0.66 of their length below uppermost node, disarticulating at the nodes. Lateral branches lacking. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs ciliate, 1.5–3 mm long. Ligule a fringe of hairs, 0.3–0.6 mm long. Leaf-blades convolute, 30–50 cm long, 3–4 mm wide, stiff. Leaf-blade surface scabrous. Leaf-blade apex filiform.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 5–10 cm long, 2–3 cm wide, bearing few spikelets. Panicle branches glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–12 mm long.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.8–1 mm long. Floret callus evident, 0.6–0.8 mm long, pilose. Floret callus hairs 1–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 9–11 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 9–11 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 4.5–5.5 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins ciliate. Lemma hairs 1–2 mm long. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.33–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, adnate to lemma lobes at base, 5.5–8 mm long overall, with a straight or slightly twisted column. Column of lemma awn 1.5–2 mm long. Lateral lemma awns absent. Palea 4.5–6 mm long, 2 -veined. Palea keels 1–1.2 mm apart, ciliate. Palea surface pubescent, hairy on back, hairy below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.6–0.8 mm long, fleshy, glabrous. Anthers 3, 2–2.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Minas Gerais, Rio de Janeiro, Espirito Santo.

Danthonia californica Boland. *Proc. Calif. Acad.* 2: 182 (1863).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *Bolander 10 [W. Boott 10]*, USA: California: on borders of cultivated fields near the bay at Oakland, hills near Mission Dolores, San Francisco (GH; ILT: US-907322). LT designated by J. Findlay & B. Baum in *Canad. J. Bot.* 52: 1574 (1974).7; cited by Baeza, *Sendtnera* 3: 26 (1996).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (306).

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–100 cm long, disarticulating at the nodes. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–20 cm long, 1–3 mm wide.

Inflorescence. Inflorescence a panicle, comprising 2–5 fertile spikelets. Panicle open, ovate, 2–5 cm long, bearing few spikelets. Primary panicle branches spreading or reflexed. Spikelets spreading or deflexed, solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, 10–20 mm long.

Fertile Spikelets. Spikelets with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 15–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–20 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 15–20 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 8–10 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliate, hairy below. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7–12 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long, shorter than principal. Palea 2 -veined. Palea keels winged, narrowly winged, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

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

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

Country /Province /State. **Western Canada, Northwest USA, Southwestern USA, South-central USA.** Alberta, British Columbia, Saskatchewan. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Arizona, California, Nevada, Utah. New Mexico. **Southern South America.** Chile Central.

Maule, Biobio, La Araucania.

Danthonia chaseana Conert. *Senckenberg. Biol.*, 56(4–6): 308 (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 Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 9711*, 30 Apr 1925–4 May 1925, Brazil: Minas Gerais: summit of Pontao Crystal, alt. 2798 m, dense tufts, mossy turf among rocks (F; IT: FR, MO-924231, NY, US-1257224).

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

Derivation (Clifford & Bostock 2007): *L. -ana*, indicating connection. In honor of Mary Agnes Merrill Chase (1869–1963) United States agrostologist.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial. Basal innovations extravaginal. Culms erect, 15–37 cm long, 2–4 -noded. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate, 3.5 mm long. Ligule a fringe of hairs, 0.2–0.6 mm long. Leaf-blades 5–11 cm long, 0.8–1.2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 3–15 fertile spikelets. Peduncle glabrous. Panicle open, linear, 1.6–6 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2.5–16.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 7–9.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.7–1.2 mm long, glabrous. Floret callus evident, 0.4–0.5 mm long, pilose. Floret callus hairs 0.3–1.3 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–8 mm long, 1.1–1.2 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 3.5–6.5 mm long, 0.75–1.2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 4.5–5.5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent, hairy below, with marginal hair tufts, bearing 2 hair tufts in all. Lemma hairs 0.6 mm long. Lemma apex lobed, 2 -fid, with lobes 1.2–2.8 mm long, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 3.5–5.3 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of

lobes, 0.3–1.5 mm long, shorter than principal. Palea lanceolate, 3–4 mm long, 2 -veined. Palea surface pilose, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.4–0.6 mm long, fleshy, glabrous. Anthers 3, 1.7–2.1 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.5–2 mm long, dark brown. Embryo 0.5 length of caryopsis. Hilum linear, 0.3 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Danthonia chiapasensis G. Davidse. *Novon*, 2(2): 100 (1992).

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

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. E. Breedlove* & *R. F. Thorne 30108*, 11 Dec 1972, Mexico: Chiapas: Municipio Villa Corzo: steep slopes with montane rainforest, evergreen cloud forest and elfin forest, *Drimys*, *Quercus*, *Ostrya*, *Liquidambar*, *Styrax*, and *Ilex*, on the SE side of Cerro Tres Picos and the ridges near summit, elev. 2100 –2500 m (DS-647823 (photo, MO); IT: MO-4026164 (fragm.)).

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

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 40–60 cm long. Leaves basal and cauline. Leaf-sheaths without keel, glabrous on surface. Leaf-sheath oral hairs ciliate, 0.7–1.1 mm long. Ligule a fringe of hairs, 0.5–1.5 mm long. Leaf-blades involute, 20–45 cm long, 2–5 mm wide. Leaf-blade surface ribbed, grooved adaxially, glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 8–13 cm long, 1.5 cm wide. Primary panicle branches ascending, 3–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 5–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 17–21 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose. Floret callus hairs 0.5–1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–21 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 17–21 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 12–14 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins ciliate, hairy below. Lemma apex lobed, 2 -fid, with lobes 8–9.5 mm long, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 20–25 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, shorter than principal. Palea 6 mm long, 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, obovate, fleshy, ciliate. Anthers 3, 1.7–3.4 mm long. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southeast Mexico.

Chiapas.

Danthonia chilensis E. Desv. *C. Gay, Fl. Chil.* 6: 360 (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: HT: *M. Gay s.n.*, Chile: Valdivia in herbosis las Llanos (P; IT: US- (fragm. ex P "Desv. 34"), W).

Illustrations (Books): E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (130, Fig. 28), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (37, Fig. 12).

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending or decumbent, 5–40 cm long, 2–3 -noded. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.2 mm long. Leaf-blades flat or convolute, 5–12 cm long, 1 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle, comprising 2–6 fertile spikelets. Panicle open, oblong, 2.5–3.5 cm long, bearing few spikelets. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.75–1.1 mm long, pilose. Floret callus hairs 0.5–1.2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 10–12 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume linear, 10–12 mm long, 2.5 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 4.5 mm long, coriaceous, much thinner on margins, without keel, 5 -veined, more than 3-veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 9.5–10 mm long overall, with twisted column. Column of lemma awn 2.5–3 mm long. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long, shorter than principal. Palea 2 -veined. Palea keels 1 mm apart, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3, 2 mm long. Caryopsis with adherent pericarp, 1.5–2 mm long. Embryo 0.4 length of caryopsis. Hilum linear.

Cleistogenes present, in lower sheaths.

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

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central, Juan Fernandez Is.

TDWG4. Mendoza, Neuquén, Río Negro. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valparaiso. Valparaiso, O'Higgins, Maule, Biobio, La Araucania.

Danthonia cirrata Hackel & Arech. *An. Mus. Montevideo*, 1: 367 (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).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: (MVM; IT: SGO (fragm. ex MVM)).

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (261, Fig. 52), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (454, Fig. 97 & 465, Fig. 101), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (62, Fig. 15), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (*Fl. Pat.* 3: 37, Fig. 13 (1978)), B.Rosengurt, *Gramineas Uruguayas I* (1970) (48, Fig. 14 & 50, Fig. 15).

Derivation (Clifford & Bostock 2007): with twisted leaf-blades.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations intravaginal. Culms 20–80 cm long. Leaf-sheath oral hairs bearded, 3 mm long. Ligule a fringe of hairs, 0.4–1 mm long. Leaf-blades flat or conduplicate, 3–22 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy abaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 3–10 cm long. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

Fertile Spikelets. Spikelets comprising 5–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 15–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long. Floret callus evident, 0.5–1 mm long, pilose. Floret callus hairs 0.5–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–27 mm long, 1 length of upper glume, membranous, without keels, 3–7 -veined. Lower glume apex attenuate. Upper glume lanceolate, 15–27 mm long, 1.4–1.7 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex attenuate.

Florets. Fertile lemma elliptic, 11–13 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins ciliolate. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, incised 0.66 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, curved, 10–15 mm long overall, with a straight or slightly twisted column. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long, shorter than principal. Palea 0.5 length of lemma, 2 -veined. Palea keels 1.5–2 mm apart, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous or ciliate. Anthers 3, 1.5–2.9 mm long. Caryopsis with adherent pericarp, ovoid, 1.4–2.3 mm long. Hilum linear.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil Southeast, Brazil South. Argentina Northeast, Argentina South, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Buenos Aires, Cordoba. Neuquén, Río Negro.

Danthonia compressa Austin. *Bull. Torrey, Bot. Club*, 3: 21 (1869).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *C.F. Austin s.n.*, 10 Jul 1869, USA: New York: Herkimer Co.: Danube (PH; IT: NY-8528, NY-380506, US-865625 (fragm.)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (304).

Derivation (Clifford & Bostock 2007): *L. comprimo*, squeeze together.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Culms geniculately ascending or decumbent, 40–80 cm long, disarticulating at the nodes. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Collar glabrous or pubescent. Leaf-blades filiform, involute, 10–25 cm long, 2–3 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate, 5–8 cm long. Primary panicle branches bearing 2–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–14 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–14 mm long, 3 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 3.5–5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 6–7 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long, shorter than principal. Palea 2 -veined. Palea keels winged, narrowly winged, ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada, Northeast USA, Southeastern USA. Ontario, Prince Edward I, Quebec. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Alabama, Kentucky, Tennessee.

Danthonia decumbens (L.) DC. *Fl. Fr.* 3: 33 (1805).

Accepted by: R.J.Soreng et al., *Catalogue of 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), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Sieglingia*).

TYPE from Europe. **Basionym or Replaced Name:** *Festuca decumbens* L., *Sp. Pl.* 75 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Anon.*, Europe (LINN-92.16). LT designated by Baeza P. in Cafferty et al., *Taxon* 49(2): 250 (2000).

Recent Synonyms: *Melica decumbens* (L.) Weber, *Spicil. Fl. Gotting.* 3 (1778).

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (352 as *Sieglingia decumbens*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (523, Fig 102 as *Sieglingia*), N.N.Tsvelev, *Grasses of the Soviet Union* (1983) (927 (613), Pl.12 as *Sieglingia*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004),

M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (304), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (170, Fig 55).

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) (as *Melica*).

Derivation (Clifford & Bostock 2007): *L. decumbo*, fall down. Culms prostrate.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 10–45(–70) cm long, 1–3 -noded. Leaves mostly basal. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades flat or involute, 5–25 cm long, 2–4 mm wide. Leaf-blade apex obtuse or abruptly acute.

Inflorescence. Inflorescence a panicle, comprising (3–)4–9(–11) fertile spikelets. Panicle contracted, linear or oblong, 2–7 cm long, bearing few spikelets. Primary panicle branches bearing 1–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, (6.5–)8–11(–13) mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5 mm long. Floret callus pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or ovate, (3–)4–9(–11) mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 3–5 -veined. Lower glume apex obtuse or acute. Upper glume lanceolate or ovate, 1.2–1.7 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, keeled above, 3–5 -veined. Upper glume apex obtuse or acute.

Florets. Fertile lemma elliptic, 5–7 mm long, coriaceous, without keel, 7–9 -veined, more than 3-veined. Lemma margins pubescent, hairy below. Lemma apex dentate, 2 -fid, mucronate. Principal lemma awn from a sinus. Palea 1 length of lemma, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3, 0.2–0.5 mm long, retained within floret. Caryopsis with adherent pericarp, ellipsoid. Embryo 0.33 length of caryopsis. Hilum linear, 0.25 length of caryopsis.

Cleistogenes present, in lower sheaths.

$2n = 36$ (3 refs TROPICOS).

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

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

Country /Province /State. : Denmark, Finland, Foroyar, Great Britain, Iceland, Ireland, Northern Ireland, Norway, Sweden. : Austria, Liechtenstein, Belgium, Luxembourg, Czechoslovakia, Germany, Hungary, Netherlands, Poland, Switzerland. : Corsica, Channel Islands, France, Monaco, Portugal, Sardinia, Andorra, Gibraltar, Spain, Azores. : Albania, Bulgaria, Italy, San Marino, Vatican, Romania, Malta, Turkey Europe, Yugoslavia, Belarus, Estonia, Kaliningrad, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia, Moldova, Ukraine. **Northern Africa, Macaronesia, Southern Africa, Middle Atlantic ocean.** Morocco, Tunisia. Azores, Madeira. Free State, Lesotho, Northern Cape, Western Cape, Eastern Cape. St Helena. **Caucasus, Western Asia.** Transcaucasus. Palestine, Israel & Jordan, Turkey. **Australia, New Zealand.** Victoria (*), Tasmania (*). New Zealand North I, New Zealand South I. **Eastern Canada, Northwest USA, Southwestern USA.** Newfoundland, Nova Scotia. Oregon, Washington. California. **Mesoamerica.** Costa Rica.

TDWG4.

Danthonia domingensis Hackel & Pilger. *Urb. Symb. Antill.* 6: 1 (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 Dominican Republic. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *H.F.A. von Eggers* 2227B, 29 May 1887, Dominican Republic: Hispaniola Island: Valle Nuevo, 2270 m (B (fragm., US-865629)). CS\Ex keng and urban herb..

HT: *Eggers* 2227b, Santo Domingo (B).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (71, Fig. 39).

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Basal innovations intravaginal. Culms erect, 20–60 cm long, 3–4 -noded, with 0.5 of their length below uppermost node, disarticulating at the

nodes. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 2 mm long. Ligule a fringe of hairs. Leaf-blades erect, 20–50 cm long, 1–5 mm wide. Leaf-blade surface pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle, comprising 10–30 fertile spikelets. Panicle open, elliptic, 8–15 cm long, 1–3 cm wide, bearing few spikelets. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long, pubescent.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 14–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–1.5 mm long. Floret callus evident, 1.5–2 mm long, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–18 mm long, 0.8–0.9 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 14–20 mm long, 2.5 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 5–8 mm long, chartaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma hairs 1 mm long. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7.5–14 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2–6 mm long, shorter than principal. Palea 5–8 mm long, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.7–1 mm long, fleshy, glabrous. Anthers 3, 1.5–3 mm long. Caryopsis with adherent pericarp, 2.5 mm long. Embryo 0.33 length of caryopsis. Hilum elliptic.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. South America.

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

Danthonia holm-nielsenii S. Laegaard. *Fl. Ecuador*, 57(214:1): 17 (1997).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *Holm-Nielsen et al. 5105*, 5 May 1973, Ecuador: Azuay: km 91 on Pan American Highway N of Loja, 2900n m (AAU!).

Illustrations (Books): G.Harling & C.Persson, *Flora of Ecuador* (2006) (57: 16, Fig.2 (1997)).

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths glossy, glabrous. Culms slender, 25 cm long. Leaf-sheaths mostly shorter than adjacent culm internode, pilose. Leaf-sheath oral hairs ciliate, 1–1.5 mm long. Ligule a fringe of hairs, 0.3–0.5 mm long. Leaf-blades filiform, involute, 3–5 cm long, 1.5 mm wide. Leaf-blade surface ribbed, hispid, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or elliptic, 5 cm long. Primary panicle branches 1 -nate. Panicle branches pilose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 7–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 15–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.8 mm long, pubescent. Floret callus hairs 0.2–0.4 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15–17 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume lateral veins obscure. Lower glume apex acuminate. Upper glume lanceolate, 15–17 mm long, 3 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume lateral veins obscure. Upper glume apex acuminate.

Florets. Fertile lemma elliptic to ovate, 5–6 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma apex lobed, 2 -fid, with lobes 2–3 mm long, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 10–12 mm long overall, with twisted column. Column of lemma awn 2 mm long. Lateral lemma awns present, arising on apex of lobes, 4–5 mm long, shorter than principal. Palea 3 mm long, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. South America.

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

Danthonia intermedia Vasey. *Bull. Torrey Bot. Club*, 10: 52 (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), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from Canada. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *O.D. Allen* 16, 26 Jul 1881, Canada: Quebec: Rocky Mountains, plains of British America to Mt. Albert, Lower Canada (US-86582; ILT: PH). LT designated (as type) by Lamson-Scribner, *Circ. Div. Agrostol. U.S.D.A.* 30: 6 (1901); cited by Baeza, *Sendtnera* 3: 42 (1996).

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (99), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (306).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (97: 348, Fig.15 (2010)).

Derivation (Clifford & Bostock 2007): *L. intermedia*. Having affinities with but distinct from other species.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 10–50 cm long, disarticulating at the nodes. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades involute, 5–20 cm long, 1–2 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 2–5 cm long, bearing few spikelets. Primary panicle branches appressed, bearing 1 fertile spikelets on each lower branch. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 15 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 15 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 7–8 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliate, hairy below. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 7–9 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 1–2 mm long, shorter than principal. Palea 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

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

Country /Province /State. Russian far east. Kamchatka, Magadan. **Subarctic America, Western Canada, Eastern Canada, Northwest USA, North-central USA, Southwestern USA, South-central USA.** Alaska, Northwest Territories, Yukon. Alberta, British Columbia, Manitoba, Saskatchewan. Labrador, New Brunswick, Newfoundland, Prince Edward I, Quebec. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. North Dakota, Nebraska. Arizona, California, Nevada, Utah. New Mexico.

TDWG4.

Danthonia malacantha (Steud.) Pilger. *Notizbl. Bot. Gart. Berlin*, 10: 759 (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.

TYPE from Chile. **Basionym or Replaced Name:** *Trisetum malacanthum* Steud. *Syn. Pl. Glumac.* 1: 424 (1854). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *W. Lechler* 749, Jan 1852, Chile: Huiti in pascuis (P; IT: FR, G, GOET, S, US-81776).

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

Derivation (Clifford & Bostock 2007): *Gk. malakos*, soft to the touch; *anthos*, flower. Lemmas softly hairy.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 30–50 cm long, disarticulating at the nodes. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs. Leaf-blades filiform, 3–10 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, ovate, 3–7 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–15 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 12–15 mm long, 2–3 length of adjacent fertile lemma, membranous, without keels, 5–7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 5–6 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma hairs 3 mm long. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 1–2 mm long, shorter than principal. Palea 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

$2n = 48$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central, Chile South, Juan Fernandez Is.

Rest of Chile- Biobio, La Araucania, Maule, O'Higgins, Santado, Valpariso. Coquimbo, Valparaiso, O'Higgins, Maule, Biobio, La Araucania. Los Lagos.

Danthonia melanathera (Hack.) Bernardello. *Kurtziana* 10: 249 (1977).

Accepted 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 Argentina. **Basionym or Replaced Name:** *Danthonia cirrata* var. *melanathera* Hack. *Anales Mus. Nac. Buenos Aires* 21: 112 (1911). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Stuckert 16810*, Argentina (CORD).

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

Derivation (Clifford & Bostock 2007): Gk. melas, black; anthera, of flowers. Anthers dark.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial. Basal innovations intravaginal. Culms erect, 9–32 cm long, 1–3 -noded. Leaf-sheaths pilose. Leaf-sheath oral hairs ciliate, 4 mm long. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blades 4–8 cm long, 0.8–1 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence a panicle or comprising only a few spikelets, comprising 1–4 fertile spikelets. Peduncle glabrous. Panicle open, linear, 1.9–5.3 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1.5 mm long, pubescent.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 18–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5 mm long, glabrous. Floret callus evident, 0.9–1.2 mm long, pilose or bearded. Floret callus hairs 0.4–3.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear or lanceolate, 15–30 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume linear or lanceolate, 12–29 mm long, 1–1.6 length of adjacent fertile lemma, membranous, without keels, 7 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 14–18 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma margins ciliate. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, with lobes 9–13 mm long, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 13–18 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 4–7 mm long, shorter than principal. Palea lanceolate, 5.5–7.5 mm long, 2 -veined. Palea surface pilose, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.5–1 mm long, fleshy, glabrous or ciliate. Anthers 3, 0.8–2.3 mm long, retained within floret or eventually exerted. Caryopsis with adherent pericarp, ellipsoid, 2.2–3 mm long, light brown. Embryo 0.4–0.5 length of caryopsis. Hilum linear, 0.3 length of caryopsis.

Cleistogenes present, in upper sheaths.

Distribution (TDWG). Continent. South America.

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

TDWG4. San Luis. Cordoba.

Danthonia montevidensis Hackel & Arech. *An. Mus. Monte. video*, 1: 369 (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 Uruguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Arechavaleta s.n.*, Uruguay: Montevideo (MVM; IT: B, BAA-847 (fragm. ex B)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (465, Fig. 101), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (62, Fig. 15), B.Rosengurt, *Gramineas Uruguayas I* (1970) (48, Fig. 14 & 50, Fig. 15).

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

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms erect or geniculately ascending, 30–60 cm long, 3–7 -noded, disarticulating at the nodes. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 0.4 mm long. Leaf-blades filiform, convolute, 10–30 cm long, 1–3 mm wide.

Inflorescence. Inflorescence a panicle, comprising 5–30 fertile spikelets. Peduncle 6–28 cm long. Panicle open, elliptic, 4.5–13 cm long, bearing few spikelets. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 6–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 16–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–1.5 mm long, bearded. Floret callus hairs 1.5–3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 16–30 mm long, 1 length of upper glume, membranous, without keels, 5–7 -veined. Lower glume apex acuminate. Upper glume lanceolate, 16–30 mm long, 2.5–3 length of adjacent fertile lemma, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 6.7–10.6 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma hairs 3.5–4.5 mm long. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 15–22 mm long overall, with twisted column. Column of lemma awn 0.25 length of limb. Lateral lemma awns present, arising on apex of lobes, 2–7 mm long, shorter than principal. Palea oblanceolate or obovate, 3.6–5.5 mm long, 2 -veined. Palea keels 1.3–2 mm apart, ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 1.5–3.2 mm long, fleshy, glabrous. Anthers 3, 1.5–3.2 mm long. Caryopsis with adherent pericarp, obovoid, 1.8–2.4 mm long. Hilum linear.

Cleistogenes present, in lower sheaths.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Western South America, Brazil, Southern South America.** Bolivia. Brazil South. Argentina Northeast, Uruguay.

TDWG4. Buenos Aires.

Danthonia parryi Scribn. *Coult. Bot. Gaz.* 21: 133 (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 USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *P.A. Rydberg 2397*, 19 Aug 1895, USA: Colorado: in the valley ca. 3 mi N of Georgetown (US-75062, ILT: NY-8531, NY-8532). LT designated by J. Findlay & B. Baum, *Can. J. Bot.* 52: 153 (1974).

ST: *C.C. Parry s.n. [232]*, 1867, USA: Colorado (?; IST: MO).

ST: *C.C. Parry s.n. [236]*, 1867, USA: Colorado (?; IST: MO).

ST: *E. Hall s.n. [83]*, 1862, USA: Colorado (?; IST: MO).

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (101), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (306).

Derivation (Clifford & Bostock 2007): in honor of Charles Christopher Parry (1823–90), United States botanist.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths papery, persistent and investing base of culm. Culms 30–60 cm long, disarticulating at the nodes. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Collar pubescent. Leaf-blades straight or flexuous, deciduous at the ligule, filiform or linear, flat or involute, 15–25 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle, comprising 3–8 fertile spikelets. Panicle open, ovate, 3–7 cm long, bearing few spikelets. Primary panicle branches ascending, 1–2 cm long, bearing 1–2 fertile spikelets on each lower branch. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 20–27 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 20–27 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acute. Upper glume lanceolate, 20–27 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute.

Florets. Fertile lemma elliptic, 10 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 10–14 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 2 mm long, shorter than principal. Palea 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

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

Country /Province /State. **Western Canada, Northwest USA, South-central USA.** Alberta. Colorado, Montana, Wyoming. **Western South America.** Bolivia.

Danthonia rhizomata Swallen. *Com. Bot. Mus. Hist. Nat. Montevideo*, 3, No. 39, 2 (1961).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 7364*, 15 Nov 1945, Brazil: Rio Grande do Sul: Santa Victoria do Palmar, flat, spreading, conspicuously villous blades, rhizomes present, rather common but scattered in small loose tufts, sandy campo (US-1960567; IT: MO-5170231, PEL).

Illustrations (Books): B.Rosengurtt, *Gramineas Uruguayas I* (1970) (50, Fig. 15 & 52, Fig. 53).

Derivation (Clifford & Bostock 2007): Gk. rhizoma, a root. Rhizomes well developed.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 35–45 cm long. Leaf-sheaths pilose, with simple hairs or tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs, 1 mm long. Leaf-blades flat or convolute, 7–12 cm long, 1–3 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle, comprising 1–4 fertile spikelets. Panicle open, ovate, 2.5–3 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

Fertile Spikelets. Spikelets comprising 4–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 15–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose. Floret callus hairs 3–4 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 15–25 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 15–25 mm long, 1.2–2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 12 mm long, chartaceous, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with marginal hair tufts, bearing 4 hair tufts in all. Lemma hairs 1.5–2 mm long. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, simple at base, 14–16 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 4–5 mm long. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous, truncate. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Danthonia rugoloana A.A.Sulekic. *Darwiniana*, 37: 341 (1999).

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

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

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of Zulma E. Rugolo de Agrasar (1940-) Argentinian botanist.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, 4–16 cm long, 1-noded. Culm-nodes glabrous or pubescent. Leaf-sheaths striately veined, glabrous on surface or pilose. Ligule a fringe of hairs, 0.3–0.6 mm long. Leaf-blades curved, filiform, involute, 0.3–0.6 cm long, 0.5–1 mm wide. Leaf-blade surface scaberulous, rough abaxially, pilose, hairy adaxially. Leaf-blade apex acute, hooded.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1–3 fertile spikelets, bracteate at pedicel base. Peduncle hirsute above. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–8 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 10–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.7 mm long, pilose, truncate or obtuse. Floret callus hairs 1–2.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–14 mm long, 1 length of upper glume, membranous, much thinner on margins, without keels, 3–7-veined. Lower glume lateral veins obscure. Lower glume surface smooth or asperulous, rough on veins. Lower glume apex acute or acuminate. Upper glume lanceolate, 10–14 mm long, 1.6–2 length of adjacent fertile lemma, membranous, with hyaline margins, without keels, 3–7-veined. Upper glume lateral veins obscure. Upper glume surface smooth or asperulous, rough on veins. Upper glume apex acute or acuminate.

Florets. Fertile lemma elliptic, 6–7.6 mm long, coriaceous, much thinner on margins, without keel, 7–9(–11)-veined, more than 3-veined. Lemma midvein ciliate. Lemma surface pilose, hairy below. Lemma margins ciliate. Lemma hairs 1–2.3 mm long. Lemma apex lobed, 2-fid, with lobes 3–4.5 mm long, incised 0.5–0.6 of lemma length, awned, 3-awned. Principal lemma awn from a sinus, geniculate, flat below, 5.5–7.5 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 0.5–2 mm long. Palea elliptic, 3.7–5 mm long, 2-veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.4–0.7 mm long, fleshy, ciliate. Anthers 3, 0.2–0.5 mm long, retained within floret. Caryopsis with adherent pericarp, ellipsoid, 1.7–2.3 mm long, light brown. Embryo 0.5 length of caryopsis. Hilum elliptic, 0.33 length of caryopsis.

Cleistogenes present, in lower sheaths, 1-flowered, 4.5 mm long.

Distribution (TDWG). Continent. South America.

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

TDWG4. Salta.

Danthonia secundiflora J. & C. Presl. *Rel. Haenk.* 1: 255 (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>: *vide* TROPICOS and Kew Synonymy Database: HT: *Haenke s.n.*, Peru (PR(fragm., US-495676; photo, CONC)). According to Laegaard, *Fl. Ecuad.* 57: 15 (1997), the PR type has been marked with the number 501..

Recent Synonyms: *Danthonia tenuifolia* Döll, *Fl. Bras.* 2 (3): 102 (1878). *Danthonia montana* Doell, *Mart., l. Bras.* 2(3):101 (2878).

Danthonia montana Doell in *Mart. Fl. Bras.* 2. 3. 101. (1878).

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (261, Fig. 52), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (454, Fig. 97), B.Rosengurt, *Gramineas Uruguayas I* (1970) (48, Fig. 14 & 54, Fig. 17 as *D. filifolia* & as *D. secundiflora* ssp. *secundiflora* & as *D. secundiflora* ssp. *charruana*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (57: 16, Fig.2 (1997)).

Illustrations (Journals): *Kew Bulletin* (973, Fig. 1, as *D. montana*), *Ruizia* (13:227, Fig 25d-f (1993)).

Derivation (Clifford & Bostock 2007): L. secundus, turned to one side; flos, flower. Spikelets restricted to one side of inflorescence branches.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations extravaginal. Culms 30–70 cm long, disarticulating at the nodes. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-

blades filiform, involute, 5–50 cm long, 1–4 mm wide. Leaf-blade surface glabrous or pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or elliptic, 2.5–13 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 7.5–23 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded. Floret callus hairs 3–4 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.5–23 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 7.5–23 mm long, 5–7 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 1.5–2.7 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma margins ciliate. Lemma hairs 3–4 mm long. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 10–12 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 3–4 mm long, shorter than principal. Palea oblanate, 3.5–6 mm long, 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

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

Country /Province /State. Mexico. Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Guatemala. Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil Northeast, Brazil Southeast, Brazil South. Uruguay.

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo, Sao Paulo Parana, Catarina, Rio Grande do Sul. Salta. Puebla. Hidalgo. Chiapas.

Danthonia sericea Nutt. *Gen. Am.* 1: 71 (1818).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *T.Nuttall s.n.*, USA: from Carolina to Florida [USA: Georgia] (PH; ILT: US-91133 (fragm.)). LT designated by ?; cited by Baeza, *Sendtnera* 3: 57 (1996).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (304).

Derivation (Clifford & Bostock 2007): *L. sericus*, silken; -ea, indicating resemblance. Densely invested in part or totally with long hairs.

Classification. Subfamily Danthoioideae. Tribe: Danthoieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long, disarticulating at the nodes. Leaf-sheaths pilose or hirsute. Ligule a fringe of hairs. Leaf-blades flat or involute, 10–25 cm long, 2–4 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear, 6–10 cm long. Primary panicle branches bearing 2–6 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 12–17 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 12–17 mm long, 3 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 4–5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 5–7 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 4–5 mm long, shorter than principal. Palea 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. North America.

Country /Province /State. Northeast USA, Southeastern USA. West Virginia. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.

Danthonia spicata (L.) Roem. & Schult. *Syst.* 2: 690 (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. **Basionym or Replaced Name:** *Avena spicata* L., *Sp. Pl.* 80 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *C.V. Piper 943*, 13 Jul 1890, USA: Washington, Mason Co. (US-1913582).

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (103), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (304), F.W.Gould, *The Grasses of Texas* (1975) (59, Fig. 21).

Derivation (Clifford & Bostock 2007): *L. spica*, thorn; -ata, possessing; Inflorescence a spike or spicate panicle.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–80 cm long, disarticulating at the nodes. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths glabrous on surface or puberulous, with simple hairs or tubercle-based hairs. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades curled or flexuous, filiform, flat or involute, 7–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 2–5 cm long, bearing few spikelets. Primary panicle branches indistinct the panicle almost racemose, bearing 1 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long.

Fertile Spikelets. Spikelets comprising 4–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 10–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–13 mm long, 1 length of upper glume, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 10–13 mm long, 2.6–2.8 length of adjacent fertile lemma, membranous, without keels, 3–5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 3.5–5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 5–7 mm long overall. Palea 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

$2n = 36$ (2 refs TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. Subarctic America, Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico. Yukon. Alberta, British Columbia, Manitoba, Saskatchewan. Labrador, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward I, Quebec. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. 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).

Puebla. Coahuila, Hidalgo, Tamaulipas. Veracruz.

Danthonia unispicata (Thurb.) Munro ex Macoun. *Can. Pl. Cat.* 2,4:215 (1888).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Danthonia californica* var. *unispicata* Thurb., Wats., *Bot. Calif.* 2:294 (1880). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Bolander s.n.*, USA

ST: *Parry s.n.*, USA

ST: *Lemon s.n.*, USA.

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (105), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (306).

Derivation (Clifford & Bostock 2007): L. unus, single; spica, thorn; -ata, possessing. Inflorescences usually of a single raceme thereby resembling a spike.

Classification. Subfamily Danthonioideae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 15–25 cm long, disarticulating at the nodes. Leaf-sheaths pilose. Ligule a fringe of hairs. Leaf-blades flat or involute, 4–15 cm long, 1–3 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1(–3) fertile spikelets. Spikelets appressed or ascending, 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 elliptic, laterally compressed, 15–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 13–18 mm long, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 13–18 mm long, 2 length of adjacent fertile lemma, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 7–9 mm long, chartaceous, without keel, 7 -veined, more than 3-veined. Lemma margins eciliate or ciliate, hairy below. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8–9 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 1–2 mm long, shorter than principal. Palea 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, glabrous. Anthers 3. Caryopsis with adherent pericarp. Hilum linear.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. North America.

Country /Province /State. Western Canada, Northwest USA, Southwestern USA. British Columbia. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. California, Nevada, Utah.

Danthonidium gammiei (Bhide) C. E. Hubbard. *Hook. Ic. Pl.* 34 t. 3331 (1937).

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 India. **Basionym or Replaced Name:** *Danthonia gammiei* Bhide *J. Proc. Asiat. Soc. Bengal* 1911, n.s. 7: 513, 51, t. 6 (1912)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: In provincia Bombay, ad Castle rock, ... mense Octobris, A.D. 1902, *G.A. Gammie s.n.*

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (480, Fig 53), S.W.L.Jacobs & J.Everett (2000) (372, Fig. 2).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3331 (1937)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of James Alexander Gammie (1839–1924), Scottish botanist.

Classification. Subfamily Arundinoideae. Tribe: Arundineae. Tribe: Danthonieae.

Habit, Vegetative Morphology. Annual. Culms erect, 10–60 cm long. Ligule a fringe of hairs. Leaf-blades 1.5–7.5 cm long, 1–2.3 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence composed of racemes. Peduncle pilose above. Racemes 1, single, oblong, paucilateral, 2–5 cm long, bearing few fertile spikelets, bearing 3–10 fertile spikelets on each. Rhachis angular, puberulous on surface. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, bearded, with longer hairs above, truncate. Floret callus hairs 0.25 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 12–15 mm long, 1.2–1.3 length of upper glume, chartaceous, without keels, 5 -veined. Lower glume apex acuminate, awned, 1 -awned, awn 3–4 mm long. Upper glume lanceolate, 10–12 mm long, 3 length of adjacent fertile lemma, chartaceous, without keels, 3 -veined. Upper glume apex acuminate, awned, 1 -awned, awn 2–3 mm long.

Florets. Fertile lemma oblong, linear in profile, 4–5 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pubescent, with a transverse fringe of hair. Lemma margins convolute, covering most of palea. Lemma hairs 1–1.5 mm long. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.25–0.33 of lemma length, acute, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 27 mm long overall, with twisted column. Column of lemma awn glabrous. Lateral lemma awns present, arising on apex of lobes, ascending, 5–7 mm long, shorter than principal. Palea oblong, 1 length of lemma, 2 -veined. Palea keels contiguous above a sulcus, ciliate. Palea apex dentate, 2 -fid, with excurrent keel veins. Apical sterile florets distinct from fertile, 1 in number, barren, linear, 1 mm long. Apical sterile lemmas pilose, adorned on margins.

Flower and Fruit. Lodicules 2, cuneate, membranous. Anthers 3. Stigmas 2, terminally exerted.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala. Maharashtra.

Danthoniopsis acutigluma Chippind. *Blumea*, *Suppl.* 3, 27 (1946).

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

TYPE from Zimbabwe. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Northern Rhodesia: north side of Mwendafye near Munshiwemba, Mar 1942, *F.O. Stohr* 786.

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

Derivation (Clifford & Bostock 2007): *L. acuo*, sharpen; *gluma*, husk. Glumes acuminate.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–120 cm long. Ligule a fringe of hairs. Leaf-blades 10–25 cm long, 3–15 mm wide. Leaf-blade margins crenate.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 5–25 cm long. Panicle branches pubescent 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 oblong, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, glabrous, obtuse.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.6–0.7 length of upper glume, chartaceous, purple, without keels, 3 -veined. Lower glume surface glabrous or pubescent or pilose. Lower glume apex acuminate. Upper glume oblong, 1 length of spikelet, chartaceous, purple, without keels, 3–5 -veined. Upper glume surface glabrous or pubescent or pilose. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 5–7 -veined, acute. Fertile lemma oblong, 7–8 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, hairy below, with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 10–17 mm long overall, with twisted column, deciduous, abscising from top of lemma. Palea 2 -veined. Palea keels approximate, winged, narrowly winged, with toothed wings.

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

Distribution (TDWG). Continent. Africa.

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

Danthoniopsis aptera Correia & Phipps. *Bol. Soc. Brot.*, Ser. 2, 41: 191 (1967).

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

TYPE from Angola. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Angola: Humla: prximo do Tchivinguiro, em zona de *Brachystegia spiciformis*, no rebordo do planalto, 14 May 1965, *R.I. de S. Correia* 3266 (HT: LUAI; IT: UWO).

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

Derivation (Clifford & Bostock 2007): *Gk a-*, without; *petron*, wing or feather-like. The palea keels are unwinged.

Classification. Subfamily Panicoideae. Tribe: Tristachyidae.

Habit, Vegetative Morphology. Perennial. Culms erect, 40–80 cm long, 8-noded. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths pilose. Ligule a fringe of hairs, 1 mm long. Leaf-blades lanceolate, 8–10 cm long, 6–12 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade margins crenate, scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 3–9.5 cm long, 2–4 cm wide. Primary panicle branches 1–4 cm long. Panicle axis pubescent. Spikelets in threes. Fertile spikelets pedicelled, 3 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 lanceolate to oblong, laterally compressed, acuminate, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose, hairy in 2 tufts, obtuse.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic to ovate, 0.75 length of upper glume, membranous or chartaceous, dark green or purple, without keels, 3-veined. Lower glume primary vein scabrous. Lower glume surface pubescent. Lower glume margins tuberculately ciliate. Lower glume apex caudate. Upper glume lanceolate or oblong, 9 mm long, 1 length of spikelet, chartaceous, dark green or purple, without keels, 3-veined. Upper glume primary vein scabrous. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate to ovate, 8 mm long, 1 length of spikelet, membranous, 5–7-veined, puberulous, hairy above, hairy on veins, pubescent on margins, acute. Palea of lower sterile floret 5.5–6 mm long. Fertile lemma oblong, 5–5.5 mm long, coriaceous, without keel, 7-veined, more than 3-veined. Lemma surface with a transverse row of hair tufts, bearing 8 hair tufts in all, inner surface pubescent. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2-fid, incised 0.33 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 10–11 mm long overall, with twisted column. Column of lemma awn pubescent. Palea 5 mm long, 2-veined. Palea keels wingless, ciliolate.

Distribution (TDWG), Continent. Africa.

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

Danthoniopsis barbata (Nees) C. E. Hubbard. *Kew Bull.* 1934, 435 (1934).

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

TYPE from Yemen. **Basionym or Replaced Name:** *Tristachya barbata* Nees *Fl. Afr. Austral.* 3: 269 (1841). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Schimper* 788, Feb, Arabia: in *rupibus prope Ferihi* (MO-38372, US-1127169).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (287, Fig 115), L.Boulos, *Flora of Egypt* 4 (2005) (322, Pl. 95), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (248, Fig 145).

Derivation (Clifford & Bostock 2007): L. bearded, barbed. With hairs on the callus, glumes or lemma.

Classification. Subfamily Panicoideae. Tribe: Tristachyidae.

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Culms erect or geniculately ascending, 30–40 cm long. Leaf-sheaths pubescent or hirsute. Leaf-sheath oral hairs bearded. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 2.5–18 cm long, 3–10 mm wide, stiff, glaucous. Leaf-blade surface glabrous or pilose. Leaf-blade margins cartilaginous, entire, scabrous.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, oblong, 4–18 cm long. Panicle branches scaberulous. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster, subequal. Pedicels present, unequal, 0.5–4 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, laterally compressed, 9–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6–1 mm long, pubescent, 2-toothed.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 4–7 mm long, 0.5 length of upper glume, chartaceous, pallid or purple, without keels, 3-veined. Lower glume surface asperulous. Lower glume margins eciliate or ciliolate. Lower glume apex acute. Upper glume ovate, 9–11 mm long, 1 length of spikelet, chartaceous, pallid or purple, without keels, 3-veined. Upper glume surface asperulous. Upper glume margins eciliate or ciliolate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, oblong, 9–11 mm long, 1 length of spikelet, membranous, 7–9-veined, scaberulous, ciliolate on

margins, acute. Palea of lower sterile floret pilose. Fertile lemma oblong, 5–6.5 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma surface pubescent, with a transverse fringe of hair. Lemma margins involute, interlocking with palea keels. Lemma hairs 4–5 mm long. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.3 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 16–18 mm long overall, with twisted column, deciduous, abscising from top of lemma. Column of lemma awn 5 mm long. Lateral lemma awns present, arising on apex of lobes, 2–3 mm long, shorter than principal. Palea 2 -veined. Palea keels approximate, thickened, winged, narrowly winged. Palea surface pubescent, hairy on back, with turgid hairs.

Flower and Fruit. Anthers 3, 3.5–5 mm long. Caryopsis with adherent pericarp, obovoid, flattened, 3 mm long. Hilum linear.

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

Country /Province /State. Northern Africa, Northeast tropical Africa. Egypt, Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Arabian Peninsula. Yemen.

Danthoniopsis chevalieri A. Camus & C. E. Hubbard. *Rev. Bot. Appliq.* 14 :780 (1934).

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: Guinee, Fouta Djallon: Chevalier;Guinee, Labe to Mali: Chevalier 34603 ;Guinee, Timbo: Pobeguine 1727 ;Sierra Leone, Serikuda: Glanville 313 ;.

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (163, Fig. 88).

Derivation (Clifford & Bostock 2007): in honor of Jean Baptiste Auguste Chevalier (1873–1956) French botanist and collector in tropical Africa, SE Asia and Brazil.

Classification. Subfamily Panicoideae. Tribe: Tristachyidae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths villous. Culms erect, 120–200 cm long, 3–4 -noded. Culm-nodes pubescent. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 30–60 cm long, 10–20 mm wide. Leaf-blade surface glabrous or pubescent, hairy adaxially, with tubercle-based hairs. Leaf-blade margins cartilaginous, entire, scabrous.

Inflorescence. Inflorescence a panicle. Peduncle glandular. Panicle open, oblong or ovate, 20–27 cm long. Panicle branches glandular (on axis), scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–8 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, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, truncate.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 5–6 mm long, 0.5 length of upper glume, chartaceous, yellow or purple, without keels, 3 -veined. Lower glume apex cuspidate. Upper glume elliptic, 8–10 mm long, 1 length of spikelet, chartaceous, yellow or purple, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, oblong, 8–10 mm long, 1 length of spikelet, membranous, 5–7 -veined, acuminate. Palea of lower sterile floret scabrous. Fertile lemma oblong, 5–5.5 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pilose, with a transverse fringe of hair. Lemma margins involute, interlocking with palea keels. Lemma hairs 2–3 mm long. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.3 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 7–8 mm long overall, with twisted column, deciduous, abscising from top of lemma. Column of lemma awn 3–4 mm long. Palea 2 -veined. Palea keels approximate, thickened, winged, narrowly winged. Palea surface papillose.

Flower and Fruit. Anthers 3, 3–4 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Guinea, Sierre Leone.

Danthoniopsis chimanimaniensis (Phipps) W. D. Clayton. *Kew Bull.* 21: 123 (1967).

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

TYPE from Zimbabwe. **Basionym or Replaced Name:** *Gazachloa chimanimaniensis* J.B. Phipps *Kirkia* 4: 116 (1964)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Southern Rhodesia: E: Chimanimani Mountains, 5000 ft, growing on rock in middle of stream, fl. Oct 1950, *Plowes 1242* (HT: SRGH; IT: K).

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

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

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–100 cm long. Ligule a fringe of hairs. Leaf-blades filiform, convolute, 20–40 cm long, 1–1.5 mm wide. Leaf-blade margins entire.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 6–15 cm long. Spikelets in threes. Fertile spikelets pedicelled, 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 oblong, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6 mm long, pubescent, obtuse.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume elliptic, 0.8 length of upper glume, chartaceous, pallid or purple, without keels, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, chartaceous, pallid or purple, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 5 -veined, acute. Fertile lemma oblong, 4.5–6 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 12–18 mm long overall, with twisted column, persistent. Lateral lemma awns present, arising on apex of lobes, 1–2 mm long, shorter than principal. Palea 2 -veined. Palea keels approximate, thickened, winged, narrowly winged.

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Mozambique, Zimbabwe.

Danthoniopsis dinteri (Pilger) C. E. Hubbard. *Kew Bull.* 1934, 436 (1934).

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:** *Trichopteryx dinteri* Pilg. *Bot. Jahrb. Syst.* 51(3–4): 414 (1914). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Dinter 2438*, Jan 1912, Namibia: Gaub, Haisib-Omo (B).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):203, t. 55), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (284, Fig 255), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), G.E.Gibbs Russell et al., *Grasses of Southern Africa* (1990) (101, Fig 59).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3447 (1943)).

Derivation (Clifford & Bostock 2007): in honor of Kurt Dinter (1868–1945) German botanist who collected widely in southern Africa.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Annual, caespitose. Culms 50–300 cm long, 3 -noded. Culm-nodes pubescent. Ligule a fringe of hairs. Leaf-blades 25–50 cm long, 5–20 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins crenate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 25–50 cm long. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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 oblong, laterally compressed, 14–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, truncate.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume ovate, 0.33 length of upper glume, chartaceous, pallid or purple, without keels, 3–5 -veined. Lower glume apex acute, mucous or mucronate. Upper glume lanceolate, 1 length of spikelet, chartaceous, pallid or purple, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7 -veined, caudate. Fertile lemma oblong, 9–12 mm

long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts, bearing 6–8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 20–35 mm long overall, with twisted column, deciduous, abscising from top of lemma. Palea 2 -veined. Palea keels approximate, thickened, winged, narrowly winged, with clavate appendages on wings. Palea surface papillose.

Flower and Fruit. Anthers 3, 3.5–5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

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

Danthoniopsis lignosa C. E. Hubbard. *Kew Bull.* 1949, 351 (1949).

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

TYPE from Angola. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J. Gossweiler 11051*, 7 Jun 1937, Angola: Huila (US-1935979).

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

Derivation (Clifford & Bostock 2007): *L. lignum*; wood; -osa, abundance. Culms woody.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths sparsely hairy to villous. Culms erect, 150–200 cm long, woody. Culm-nodes bearded. Ligule a fringe of hairs. Leaf-blades convolute, 25–50 cm long, 3–5 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 10–16 cm long, 2.5–3 cm wide. Primary panicle branches appressed, 1–2 -nate, 2–4 cm long. Panicle axis scaberulous. Panicle branches flexuous, scaberulous, glabrous to pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, unequal, 1–3 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, hairy on the margins, truncate. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume ovate, 2.5–3.5 mm long, 1 length of upper glume, chartaceous, yellow or purple, without keels, 3–5 -veined. Lower glume surface puberulous. Lower glume apex acute, mucronate. Upper glume ovate, 2.5–3.5 mm long, 0.5–0.6 length of spikelet, chartaceous, yellow or purple, without keels, 5 -veined. Upper glume surface puberulous. Upper glume apex acute, mucronate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, elliptic, 5–6 mm long, membranous, 7–9 -veined, puberulous, acuminate, mucronate. Palea of lower sterile floret pubescent, adorned on keels. Fertile lemma oblong, 3 mm long, coriaceous, without keel, 11 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma hairs 2 mm long. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 7–8 mm long overall, with twisted column. Column of lemma awn 2 mm long. Palea 2 -veined. Palea keels contiguous above a sulcus, thickened, winged, narrowly winged.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

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

Danthoniopsis parva (Phipps) W. D. Clayton. *Kew Bull.* 21: 123 (1967).

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:** *Petrina parva* J.B. Phipps *Kirkia* 4: 118 (1964). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Transvaal: Soutpansberg, on Williespoort, in crevices in steep krantz, 3500 ft, fl. 18 Mar 1948, *Codd7 Dyer 3922* (HT: SRGH).

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

Derivation (Clifford & Bostock 2007): *L. small*. Of dwarf stature.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 10–30 cm long, 5-noded, rooting from lower nodes. Culm-nodes glabrous. Ligule a fringe of hairs, 1 mm long. Leaf-blades 2–5.5 cm long, 1–2 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 2–5 cm long. Primary panicle branches 1–2-nate. Panicle axis pubescent. Panicle branches capillary, pilose. Spikelets solitary. 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 oblong, laterally compressed, 4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, truncate.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate or ovate, 3 mm long, 0.75 length of upper glume, chartaceous, without keels, 3-veined. Lower glume surface puberulous to pilose. Lower glume apex acute. Upper glume lanceolate or ovate, 4 mm long, 0.9 length of spikelet, chartaceous, without keels, 5-veined. Upper glume surface pubescent or pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate, 4.5 mm long, membranous, 5(–7)-veined, truncate. Palea of lower sterile floret pubescent, adorned on keels. Fertile lemma oblong, 4 mm long, coriaceous, without keel, 5–7-veined, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts, bearing 6 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2-fid, with lobes 1.2 mm long, incised 0.33 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, flat below, 8 mm long overall, with twisted column. Palea 2-veined. Palea keels contiguous above a sulcus, thickened, winged, narrowly winged, ciliolate.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 2 mm long. Caryopsis with adherent pericarp. $N = 12$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Limpopo.

Danthoniopsis petiolata (Phipps) W. D. Clayton. *Kew Bull.* 21: 123 (1967).

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

TYPE from Zimbabwe. **Basionym or Replaced Name:** *Ratraya petiolata* J.B. Phipps *Kirkia* 4: 101, t. 10, f. 1 (1964)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J.M. Ratray 1784*, 5 Mar 1956–9 Mar 1956, Zimbabwe: Wankie District (SRGH; IT: US-2464781).

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

Derivation (Clifford & Bostock 2007): *L. petiolus*, little leg; -ata, possessing. Leaf-blades with a pseudopetiole.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–250 cm long. Ligule a fringe of hairs. Leaf-blade base with a false petiole. Leaf-blades lanceolate, 15–25 cm long, 10–35 mm wide. Leaf-blade margins crenate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–35 cm long. Spikelets solitary or 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, laterally compressed, 9–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.6 mm long, pubescent, truncate.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 length of upper glume, chartaceous, pallid, without keels, 7-veined. Lower glume apex acuminate. Upper glume ovate, 1 length of spikelet, chartaceous, pallid, without keels, 9-veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, ovate, 1 length of spikelet, membranous, 7-veined, dentate, 2-fid, mucronate. Fertile lemma oblong, 5.5–8 mm long, coriaceous, without keel, 9-veined, more than 3-veined. Lemma surface pilose, without hair tufts. Lemma margins involute, interlocking with palea keels. Lemma apex dentate, 2-fid, with triangular lobes, incised 0.1 of lemma length, awned, 1-awned. Principal lemma awn from a sinus, geniculate, flat below, 10–15 mm long overall, with twisted column, deciduous, abscissing from top of lemma. Palea 2-veined. Palea keels approximate, thickened, winged, narrowly winged.

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

Distribution (TDWG). Continent. Africa.

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

Danthoniopsis pruinosa C. E. Hubbard. *Kew Bull.* 1934, 436 (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>: *fide* TROPICOS and Kew Synonymy Database: HT: *Trapnell* 997, Zambia (K).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (285, Fig 256).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. bluish-green. Leaf-blades are covered with short white hairs.

Classification. Subfamily Panicoideae. Tribe: Tristachyidae.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pilose. Basal innovations extravaginal. Culms erect or decumbent, 80–120 cm long, woody. Culm-internodes terete. Ligule a fringe of hairs. Leaf-blades deciduous at the ligule, 8–15 cm long, 4–11 mm wide, glaucous. Leaf-blade surface glabrous or pubescent. Leaf-blade margins entire. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear to oblong, 10–25 cm long, 1.5–4 cm wide. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1.5–5 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 to oblong, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5–0.6 mm long, bearded, truncate. Floret callus hairs 0.3 length of lemma.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3.5–5 mm long, 0.5–0.6 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex acute, mucronate. Upper glume elliptic to ovate, 4.5–6.5 mm long, chartaceous, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, elliptic, 5–7 mm long, membranous, 3 -veined, acute. Palea of lower sterile floret pilose. Fertile lemma oblong, 6 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts, bearing 6 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.3 of lemma length, acuminate, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 8–12 mm long overall, with twisted column. Column of lemma awn 3–4 mm long. Palea lanceolate, 0.7 length of lemma, 2 -veined. Palea keels contiguous above a sulcus, thickened, winged, narrowly winged. Palea surface papillose. Palea apex obtuse.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 2–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, isodiametric, biconvex, sulcate on hilar side. Hilum linear.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Tanzania. Zambia, Zimbabwe. Limpopo, Mpumalanga, Kwazulu-Natal.

Danthoniopsis ramosa (Stapf) W. D. Clayton. *Kew Bull.* 21: 123 (1967).

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:** *Trichopteryx ramosa* Stapf *Bull. Misc. Inform. Kew* 1897: 298 (1897)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Burchell 2164*, South Africa: Griqualand-West.

Recent Synonyms: *Danthoniopsis anomala* (C. E. Hubbard & Schweickerdt) W.D. Clayton, *Kew Bull.* 21: 123 (1967).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (283, Fig.254B, as *Loudetia*), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984).

Derivation (Clifford & Bostock 2007): L. ramus, branch; -osa, abundance. Inflorescences or culms much branched.

Classification. Subfamily Panicoideae. Tribe: Tristachyidae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, slender, 30–50 cm long. Ligule a fringe of hairs. Leaf-blades flat or convolute, 7–15 cm long, 2–3.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 5–10 cm long, 0.5–1 cm wide. Primary panicle branches appressed, simple, 2–4 cm long. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, unequal, 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 lanceolate or oblong, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse. Floret callus hairs 2 mm long.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 4–6 mm long, 0.6–0.8 length of upper glume, chartaceous, yellow or purple, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 6–8 mm long, 1 length of spikelet, chartaceous, yellow or purple, without keels, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, oblong or ovate, 6–8 mm long, 1 length of spikelet, membranous, 5 -veined, acute. Palea of lower sterile floret winged on keels, pubescent, adorned on keels. Fertile lemma lanceolate, 5.5–6 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface without hair tufts. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with triangular lobes, with lobes 2–2.5 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 5–10 mm long overall, with twisted column. Column of lemma awn 3–4 mm long. Palea 2 -veined. Palea keels approximate, thickened, winged, narrowly winged.

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

Distribution (TDWG). Continent. Africa.

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

Danthoniopsis scopulorum (J.B. Phipps) J.B. Phipps. *Bol. Soc. Brot.*, 46: 423 (1973).

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

TYPE from Natal. **Basionym or Replaced Name:** *Gazachloa scopulorum* J.B. Phipps *Kirkia* 5(2): 229 (1966)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Natal: Louwsberg District: near Paulpietersburg, Farm Draai-om, steep quartzite krantz overlooking Pivaans River, alt. ca. 3500 ft, *L.E. Codd 4314* (HT: UWO; IT: PRE).

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

Derivation (Clifford & Bostock 2007): *L. scopulus*, cliff. Growing amongst rocks or at the bases of cliffs.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–40 cm long, 3 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Ligule a fringe of hairs. Leaf-blades filiform, involute, 10–20 cm long, 1–2 mm wide. Leaf-blade apex filiform.

Inflorescence. Inflorescence a panicle, comprising 40–70 fertile spikelets. Panicle open, lanceolate, 5–10 cm long. Primary panicle branches 2–3 -nate. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, truncate.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate or oblong, 6 mm long, 0.66 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 1 length of spikelet, chartaceous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate, 8.5 mm long, 1 length of spikelet, membranous, 7 -veined, acute. Fertile lemma oblong, 6 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma surface pilose, with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 14 mm long overall, with twisted column, persistent. Column of lemma awn 4 mm long. Lateral lemma awns present, arising on apex of lobes, 1 mm long, shorter than principal. Palea 5 mm long, 2 -veined. Palea keels approximate, thickened, winged, narrowly winged. Palea surface pubescent, hairy on back.

Flower and Fruit. Lodicules 2, 0.5 mm long. Anthers 3, anther tip smooth. Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.
Country /Province /State. Southern Africa. Kwazulu-Natal.

Danthoniopsis simulans (C. E. Hubbard) W. D. Clayton. *Kew Bull.* 21: 123 (1967).

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

Basionym or Replaced Name: *Loudetia simulans* C.E. Hubb. *Kew Bull.* 1949: 353 (1949)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Tisserant 3601*, Central African Republic: dans la region de Bozoum (K).

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

Derivation (Clifford & Bostock 2007): *L. simulans*, resemble. Resembling another species, usually in the same genus.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Basal innovations intravaginal. Culms erect, 150–300 cm long, 3–6 mm diam., 3-noded. Culm-internodes distally glabrous or pubescent. Leaf-sheaths 10–20 cm long. Leaf-sheath oral hairs bearded. Leaf-sheath auricles erect. Ligule a fringe of hairs. Leaf-blades convolute, 25–55 cm long, 3–6 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 25–55 cm long, 7–15 cm wide. Primary panicle branches ascending, 1–2-nate, 15–30 cm long. Panicle axis scaberulous. Panicle branches pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, unequal, 3–10 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 oblong, laterally compressed, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, obtuse. Floret callus hairs 3.5 mm long.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume oblong or ovate, 4–6 mm long, 0.6–0.7 length of upper glume, chartaceous, yellow or purple, without keels, 5-veined. Lower glume surface asperulous. Lower glume apex acute, mucronate (1mm). Upper glume lanceolate, 6–9 mm long, 0.8 length of spikelet, chartaceous, yellow or purple, without keels, 7–9-veined. Upper glume surface asperulous. Upper glume apex entire or dentate, 2-fid, obtuse.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, oblong or ovate, 7–10 mm long, 1 length of spikelet, membranous, 7-veined, entire or dentate, 2-fid, truncate, mucronate. Palea of lower sterile floret winged on keels, pubescent, adorned on keels. Fertile lemma oblong, 5.5–8 mm long, coriaceous, without keel, 9–11-veined, more than 3-veined. Lemma surface without hair tufts. Lemma margins involute, interlocking with palea keels, eciliate to ciliate. Lemma apex lobed, 2-fid, with lanceolate lobes, with lobes 1–2 mm long, awned, 1-awned. Principal lemma awn from a sinus, geniculate, flat below, 8–13 mm long overall, with twisted column. Column of lemma awn 4–5 mm long. Palea 2-veined. Palea keels approximate, thickened, winged, narrowly winged, ciliate.

Flower and Fruit. Anthers 3, 2.5–3 mm long. Caryopsis with adherent pericarp, ellipsoid, 5 mm long, light brown.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. Central African Republic.

Danthoniopsis stocksii (Boiss.) C. E. Hubbard. *Kew Bull.* 1935, 310 (1935).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

Basionym or Replaced Name: *Tristachya stocksii* Boiss. *Fl. Orient.* 5: 552 (1884). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Stocks 1141*,

ST: *Stocks 648*,

Illustrations (Books): N.L.Bor, *Gramineae* in K.H.Rechinger, *Flora Iranica*. No. 70/30 (1970) (Tab. 54).

Derivation (Clifford & Bostock 2007): in honor of John Ellerton Stocks (1822–1854) English-born physician and plant collector in India.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, woody. Butt sheaths pubescent. Culms geniculately ascending, 40–80 cm long. Ligule a fringe of hairs. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 1–8 cm long, 3–4.5 mm wide, stiff, glaucous. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle open, ovate, 3–10 cm long, 2–4 cm wide. Primary panicle branches bearing 1–3 fertile spikelets on each lower branch. Panicle branches capillary. Spikelets solitary. 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 oblong, laterally compressed, 10–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, truncate.

Glumes. Glumes persistent, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 6–9.5 mm long, 0.75 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 8–11.5 mm long, 0.8 length of spikelet, chartaceous, without keels, 3 -veined. Upper glume apex caudate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate, 9–12.5 mm long, membranous, 5 -veined, acuminate. Palea of lower sterile floret pubescent, adorned on keels. Fertile lemma oblong, 6–8.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with lobes 3–4 mm long, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 12–16 mm long overall, with twisted column. Column of lemma awn 4 mm long. Palea 2 -veined. Palea keels contiguous above a sulcus, thickened, winged, narrowly winged.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3. Caryopsis with adherent pericarp.

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

Country /Province /State. Western Asia. Iran. **Indian Subcontinent.** Pakistan.

Danthoniopsis viridis (Rendle) C. E. Hubbard. *Kew Bull.* 1935, 310 (1935).

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

Basionym or Replaced Name: *Trichopteryx viridis* Rendle *Cat. Afr. Pl.* 2(1): 216 (1899).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3075 (1916) as *D. gossweilleri*).

Derivation (Clifford & Bostock 2007): L. green. Widely applied but especially to species with green spikelets.

Classification. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pubescent or woolly. Culms erect, 30–140 cm long, 2–3 -noded. Lateral branches lacking. Ligule a fringe of hairs. Leaf-blades flat or convolute, 7–30 cm long, 2–15 mm wide. Leaf-blade margins crenate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 5–30 cm long. Panicle branches glabrous to villous, pubescent in axils or bearded in axils. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1 in the cluster or 2 in the cluster. Pedicels present, unequal, 0.5–5 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 lanceolate to oblong, laterally compressed, acuminate, 7–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, glabrous or bearded, obtuse. Floret callus hairs 0–2.5 mm long.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume elliptic to ovate, 0.5 length of upper glume, membranous or chartaceous, purple, without keels, 3 -veined. Lower glume surface glabrous or puberulous. Lower glume apex obtuse or acute. Upper glume lanceolate or oblong, 1 length of spikelet, chartaceous, purple, without keels, 3–5 -veined. Upper glume surface glabrous or pubescent. Upper glume apex acuminate or rostrate or caudate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate to ovate, 1 length of spikelet, membranous, 5–7 -veined, acute or acuminate. Fertile lemma oblong, 6–8.5 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface pilose, hairy below, with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, with triangular lobes, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 7–15 mm long overall, with twisted column, deciduous, abscising from top of lemma. Palea 2 -veined. Palea keels approximate, thickened, winged, narrowly winged, with toothed wings.

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. DRC. Angola, Zambia, Zimbabwe.

Danthoniopsis wasaensis C. E. Hubbard. *Kew Bull.* 1935, 310 (1935).

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

TYPE from DRC. **Basionym or Replaced Name:** *Trichopteryx wasaensis* Vanderyst *Bull. Agric. Congo Belge* 11: 112 (1920). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Vanderyst 5635*, Zaire: between Wasa and Gana (?).

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

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

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial. Culms erect, 80–110 cm long. Culm-nodes bearded. Leaf-sheaths glabrous on surface or pilose. Ligule a fringe of hairs. Leaf-blades linear or lanceolate, 10–20 cm long, 3–7 mm wide. Leaf-blade surface pilose, hairy adaxially, with tubercle-based hairs. Leaf-blade margins cartilaginous, crenate, scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle pilose above. Panicle open, lanceolate or ovate, 15–20 cm long, 4–8 cm wide. Primary panicle branches 4–8 cm long. Panicle axis pubescent or pilose. Panicle branches capillary, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, unequal, 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 lanceolate, laterally compressed, acuminate, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, bearded, truncate.

Glumes. Glumes persistent, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume oblong or ovate, 4–5 mm long, 0.5 length of upper glume, membranous, yellow or purple, without keels, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 8–10 mm long, 1 length of spikelet, membranous, yellow or purple, without keels, 3 -veined. Upper glume apex caudate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate, 8–10 mm long, membranous, 7 -veined, acuminate. Palea of lower sterile floret winged on keels, pubescent, adorned on keels. Fertile lemma lanceolate or oblong, 5.5–6 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface with a transverse row of hair tufts, bearing 8 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma hairs 2–2.5 mm long. Lemma apex lobed, 2 -fid, with lobes 2 mm long, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, flat below, 11–14 mm long overall, with twisted column. Column of lemma awn 3.5–5 mm long. Palea 2 -veined. Palea keels contiguous above a sulcus, thickened, winged, narrowly winged, with clavate appendages on wings.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 3–4 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Dasyochloa pulchella (Kunth) Willd. ex Rydb. *Agric. Exp. Sta. Agric. Coll. Colorado Bull.* 100: 18, 37 (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 (as *Erioneuron*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. **Basionym or Replaced Name:** *Triodia pulchella* Kunth *Nov. Gen. Sp. (quarto ed.)* 1: 155–156, t. 47 (1815)[1816]. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Humboldt & Bonpland s.n.*, Sep, Mexico: Guanajuato (P; IT: B-W-2046).

T: *ex hb. Humboldt*, Mexico (IT: US-91469 (fragm.)).

Recent Synonyms: *Erioneuron pulchellum* (H. B. & K.) Tateoka, *Amer. Journ. Bot.* 48: 572 (1961).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (48), F.W.Gould, *The Grasses of Texas* (1975) (218, Fig. 112 as *Erioneuron*).

Derivation (Clifford & Bostock 2007): L. pretty. Attractive in some respect, usually the inflorescence.

Classification. Subfamily Chloridoideae. Tribe: Eragrostideae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present, with alternating elongated and bunched internodes. Culms 2–15 cm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades aciculate, involute, 0.5–1 mm wide. Leaf-blade margins cartilaginous. Leaf-blade apex abruptly acute, hardened.

Inflorescence. Inflorescence a panicle, comprising 1–5 fertile spikelets, terminal and axillary, shorter than basal leaves, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Panicle capitate, oblong or ovate, 1–2 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 6–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile.

Spikelets oblong, laterally compressed, 7–13 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets or shorter than spikelet, shiny. Lower glume ovate, 6–8 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate, mucronate. Upper glume ovate, 6–8 mm long, 1.6–2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma ovate, 3–5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma surface pilose, hairy below. Lemma margins ciliate, hairy below. Lemma apex lobed, 2 -fid, incised 0.4–0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, straight or curved, 1.5–2.5 mm long overall. Palea 2 -veined. Palea keels ciliate. Palea surface pilose, hairy on back. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, ovoid, laterally compressed, smooth (translucent). Embryo 0.5 length of caryopsis, projecting below grain.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA, South-central USA, Mexico. Arizona. New Mexico, Texas. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico.

TDWG4. Distrito Federal, Mexico State, Morelos. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Baja California, Sonora. Jalisco.

Dasypyrum hordeaceum (Coss. & Durieu) P. Candargy. *Archiv. Biol. Veg. Athenes, Fasc.* 1: 35, 62 (1901).

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 Algeria. **Basionym or Replaced Name:** *Triticum hordeaceum* Coss. & Durieu, *Bull. Soc. Bot. France* 2: 312 (1855). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *Balansa* 304, 20 May 1852, Algeria: environs de Saoda (P; ILT: G). LT designated by Frederiksen, *Nord. J. Bot.* 11: 140 (1991).

ST: *Balansa s.n.*, Algeria: In pascuis et herbidis regionis montanae, usque ad 2000 m, in montibus Aurasii

ST: *Balansa s.n.*, Algeria: In pascuis et herbidis regionis montanae, usque ad 2000 m, ad basim montis Djebel-Mahmel loco dicto Fedj-Guerza

ST: *Balansa s.n.*, Algeria: In pascuis et herbidis regionis montanae, usque ad 2000 m, ad basim montis Djebel-Cheliah in valle Medina

ST: *Balansa s.n.*, Jun 1813, Algeria: In pascuis et herbidis regionis montanae, usque ad 2000 m, in septentrionali montis Djebel-Tougour prope Batna (?; IST: MO).

ST: *Delestre s.n.*, Algeria: Tiaret.

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

Derivation (Clifford & Bostock 2007): L. -acea, resembling. Inflorescence as with *Hordeum*.

Classification. Subfamily Pooideae. Tribe: Triticeae.

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Rhizomes elongated. Culms erect, 10–100 cm long. Leaf-sheath oral hairs lacking or ciliate. Leaf-sheath auricles absent or falcate. Ligule an eciliate membrane, 0.5–1 mm long, membranous, erose, truncate. Leaf-blades 7–15 cm long, 3–8 mm wide. Leaf-blade surface scabrous, glabrous or pilose. Leaf-blade margins scabrous, glabrous or ciliate. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, oblong, bilateral, 3–6 cm long. Rhachis fragile at the nodes, flattened, glabrous on surface, villous on margins. Spikelet packing broadside to rhachis. Rhachis internodes oblong, falling with spikelet above. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 11–12 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong, 5 mm long, 1 length of upper glume, coriaceous, much thinner on margins, 2-keeled, 2–4 -veined. Lower glume primary vein ciliate. Lower glume surface pilose, hairy at base. Lower glume apex truncate or obtuse, awned, 1 -awned, awn 7–13 mm long. Upper glume oblong, 0.5 length of adjacent fertile lemma, coriaceous, with membranous margins, 2-keeled, 2–4 -veined. Upper glume primary vein ciliate. Upper glume lateral veins convergent at apex. Upper glume surface pilose, hairy at base. Upper glume apex truncate or obtuse, awned, 1 -awned, awn 7–13 mm long.

Florets. Fertile lemma lanceolate or oblong, 7–8 mm long, coriaceous, keeled, keeled above, 5 -veined, more than 3-veined. Lemma midvein ciliate. Lemma surface pilose, hairy above, hairy on veins. Lemma apex emarginate or truncate, awned, 1 -awned. Principal lemma awn 6–12 mm long overall, limb scabrous. Palea lanceolate, 1 length of lemma. Palea keels scabrous. Apical sterile florets 1–3 in number, barren, lanceolate.

Flower and Fruit. Lodicules 2, 1.5 mm long. Anthers 3, linear, 7 mm long, yellow or purple. Ovary pubescent on apex. Caryopsis with adherent pericarp, oblong, laterally compressed, trigonous, sulcate on hilar side, 5–6 mm long, hairy at apex. Embryo 0.25 length of caryopsis. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. Europe, Africa.

Region. Southeastern Europe.

Country /Province /State. : Greece. **Northern Africa.** Algeria, Morocco, Tunisia.

Dasypyrum villosum (L.) Borb. *Term.-Tud. Kozl.* 28:331 (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), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983).

Basionym or Replaced Name: *Secale villosum* L. *Sp. Pl.* 1: 84 (1753). T:<Type of Basionym>: *fade TROPICOS* and Kew Synonymy Database: LT: *Buxbaum, Pl. Minus. Cogn. Cent.* 5: t. 41 (1740), LT designated by Turland in Cafferty et al., *Taxon* 49(2): 257 (2000).

ET: *Turland 157*, 12 Apr 1990, Crete: Ep. Agios vasilios, between Plakias and Lefkogia, 50 m (BM). ET designated by Turland in Cafferty et al., *Taxon* 49(2): 257 (2000).

NT: *Herb. Tournefort 4943*, (P). NT designated by Frederiksen, *Nordic J. Bot.* 11: 139 (1991), but this is ineffective as original material is available for lectotypification [fide Cafferty et al., *Taxon* 49(2): 257 (2000)].

Recent Synonyms: *Haynaldia villosa* (L.) Schur, *Enum. Pl. Transsilv.* 807 (1866).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 24 Poaceae*, part 1 (2007) (257).

Derivation (Clifford & Bostock 2007): L. villi, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.

Classification. Subfamily Pooideae. Tribe: Triticeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 25–70 cm long. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades 2–15 cm long, 2–4 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, oblong, bilateral, 4–10 cm long. Rhachis fragile at the nodes, villous on margins. Spikelet packing broadside to rhachis. Rhachis internodes oblong, falling with spikelet above. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7–20 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, shorter than spikelet. Lower glume oblong, 1 length of upper glume, coriaceous, much thinner on margins, 2-keeled, 5 -veined. Lower glume surface with tufts of hair along primary vein. Lower glume apex truncate, awned, 1 -awned, awn 10–40 mm long. Upper glume oblong, 0.75 length of adjacent fertile lemma, coriaceous, with membranous margins, 2-keeled, 5 -veined. Upper glume lateral veins convergent at apex. Upper glume surface with tufts of hair along primary vein. Upper glume apex truncate, awned, 1 -awned, awn 10–40 mm long.

Florets. Fertile lemma lanceolate, 10–13 mm long, coriaceous, keeled, 5 -veined, more than 3-veined. Lemma surface glabrous or pubescent, hairy on veins, with tufts of hair on midvein, bearing 2–10 hair tufts in all. Lemma apex entire or dentate, 2 -fid, acuminate, awned, 1 -awned. Principal lemma awn apical or from a sinus, 20–50 mm long overall, limb scabrous. Palea keels scabrous. Apical sterile florets 1 in number, barren, linear, 1–2 mm long.

Flower and Fruit. Ovary with a fleshy appendage below style insertion, pubescent on apex.

$N = 7$ (1 ref TROPICOS). $2n = 14$ (4 refs TROPICOS).

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

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

Country /Province /State. : GB Aliens (Ryves et al). : Baleares, Corsica, France, Sardinia. : Albania, Bulgaria, Greece, Italy, Crete, Romania, Sicily, Turkey Europe, Yugoslavia. Krym, Ukraine. **Northern Africa.** Algeria, Morocco. **Caucasus, Western Asia.** North Caucasus, Transcaucasus. Iran.

TDWG4.

Davidsea attenuata (Thwaites) T.R. Soderstrom & R.P. Ellis. *Smithsonian Contrib. Bot.*, 72: 59 (1988).

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

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Bambusa attenuata* Thwaites *Enum. Pl. Zeyl.* 5: 375 (1864). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *G.H.K. Thwaites C.P.* 3255, 1863, Sri Lanka (US-2809284, US-2809285).

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

Images: *Smith. Contr. Bot.* No. 72 : 62 (1988).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms arching, 800–900 cm long, 15–25 mm diam., woody, 26–30 -noded. Culm-internodes terete, thin-walled, 37–38 cm long, light green. Lateral branches dendroid, intravaginal. Bud complement 1. Branch complement several, in a clump, with 1 branch dominant. Culm-sheaths present, deciduous but leaving a persistent girdle, pubescent, with appressed hairs, with white hairs, ciliate on shoulders. Culm-sheath ligule 2 mm high, dentate. Culm-sheath blade linear or lanceolate, deciduous, spreading or reflexed, 4–8.5 cm long, 10 mm wide, hispid. Leaves 9–10 per branch. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.5–1 mm long, obtuse. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 10–20 cm long, 20–30 mm wide, mid-green or light green, discolorous with last colour beneath. Leaf-blade midrib prominent beneath. Leaf-blade venation without cross veins. Leaf-blade surface glabrous. Leaf-blade margins smooth or scaberulous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1–3 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 15–20 mm long, falling entire. Rhachilla internodes 1–2 mm long.

Glumes. Glumes several, comprising 2–3 gemmiferous bracts, 1 empty glumes, shorter than spikelet. Lower glume ovate, 9–11 mm long, chartaceous, without keels, 13 -veined. Lower glume margins ciliate. Lower glume apex acute.

Florets. Fertile lemma ovate, 10–14 mm long, chartaceous, without keel, 15 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex acute. Palea chartaceous, 5 -veined, 2-keeled. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, 2.4 mm long, veined, ciliate. Anthers 6, 2 mm long, yellow. Stigmas 3, plumose. Ovary unappendaged, glabrous.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Sri Lanka.

Decaryella madagascariensis A. Camus. *Bull. Soc. Bot. France* 78: 178 (1931).

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: IT: *M.R. Decary 2704*, no date, Madagascar (US-865609 (fragm. ex P)).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (107, Fig 31).

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

Classification. Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.

Habit, Vegetative Morphology. Annual. Culms decumbent, 10–30 cm long. Ligule a ciliate membrane. Leaf-blades 1.5–3.5 cm long.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, multilateral, 4–12 cm long. Spikelets spreading or ascending, solitary. Fertile spikelets pedicelled. Pedicels present, filiform or linear, 1.5–5 mm long, pubescent, tip widened.

Fertile Spikelets. Spikelets comprising 1(–2) 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, 6–8.5 mm long, falling entire, deciduous with the pedicel, pedicel base pungent.

Glumes. Glumes similar, exceeding apex of florets, firmer than fertile lemma. Lower glume ovate, 6–8.5 mm long, 1 length of upper glume, coriaceous, without keels, 5 -veined. Lower glume surface hispidulous. Lower glume apex awned (stiffly), 1 -awned, awn 3–7 mm long. Upper glume ovate, 6–8.5 mm long, 3 length of adjacent fertile lemma, coriaceous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume apex acute, awned (stiffly), 1 -awned, awn 3–7 mm long.

Florets. Fertile lemma ovate, 2.2–3 mm long, membranous, without keel, 1–3 -veined, 0–3 -veined. Lemma apex obtuse or acute.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

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

Decaryochloa diadelpha A. Camus. *Bull. Soc. Bot. France*, 93: 244 (1946).

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: LT: *Decary 18375*, 5 Sep 1942, Madagascar: Anosibe, flowers (P). LT designated by Dransfield, *Kew Bull.* 52(3): 594 (1997).

ST: *Decary 18405*, Madagascar (P).

ST: *Decary 18201*, 3 Sep 1942, Madagascar: Moramanga, Lakto, flowers (P).

ST: *Decary 18326*, 3 Sep 1942, Madagascar: Moramanga, Lakato, flowers (P).

ST: *Decary 14218*, Madagascar (P).

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

Derivation (Clifford & Bostock 2007): Gk. dis, twice; adelphos, brother. Florets with stamens arranged in two groups.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Butt sheaths absent. Culms scandent, woody. Culm-internodes terete. Lateral branches dendroid. Branch complement many, in a clump, thinner than stem. Culm-sheaths present, hispid, with dark brown hairs, auriculate, setose on shoulders. Culm-sheath blade triangular. Leaf-sheath oral hairs setose. Leaf-sheath auricles erect. Ligule an eciliate membrane. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole pilose. Leaf-blades oblong, 7–9 cm long, 12–18 mm wide. Leaf-blade venation without cross veins. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, scanty, with spathaceous subtending bracts, without axillary buds at base of spikelet, with ultimate bract subtending a compact bracteolate fascicle of spikelets.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 45–50 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 2–4 empty glumes, persistent, similar, exceeding apex of florets. Upper glume elliptic, 30–35 mm long, coriaceous, without keels, 17–21 -veined. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 45–50 mm long, coriaceous, without keel, 17 -veined, more than 3-veined. Lemma apex acuminate. Palea lanceolate, tightly convolute around flower, 1 length of lemma, coriaceous, 12 -veined. Palea keels approximate. Palea apex acuminate. Rhachilla extension 0.5 length of fertile floret, pubescent.

Flower and Fruit. Lodicules 3. Anthers 6, 16–20 mm long. Filaments united in groups (2 groups). Stigmas 3. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, hairy at apex.

Distribution (TDWG). Continent. Africa.

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

Dendrocalamus asper (Schult.) Backer ex K. Heyne. *Nutt. Pl. Ned.-Ind. ed.* 2, 1: 301 (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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006).

Basionym or Replaced Name: *Bambusa aspera* Schult. & Schult. f. *Syst. Veg.* 7(2): 1352–1353 (1830). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: In Amboina et Huamchela ad montium pedes.,

Recent Synonyms: *Dendrocalamus merrilianus* (Elmer) Elmer, *Leaflets Philipp. Bot.* 7: 2671 (1915).

Illustrations (Books): D.Farrelly, *The Book of Bamboo* (1984), S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 42).

Derivation (Clifford & Bostock 2007): L. rough. Plants with rough pedicels or leaf-blades.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1500–2000 cm long, 120 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, 40–50 cm long, distally pubescent. Lateral branches dendroid. Buds or branches present on lower part of culm. Culm-sheaths present, deciduous, 40–50 cm long, pale green, pubescent, with dark brown hairs, auriculate, with 7 mm high auricles, ciliate on shoulders, shoulders with 5 mm long hairs. Culm-sheath ligule 7–10 mm high, fimbriate. Culm-sheath blade linear, narrower than sheath, reflexed, 25 cm long, 35 mm wide, acuminate. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane or a ciliolate membrane, 2 mm long, entire or erose. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.3–0.5 cm long. Leaf-blades lanceolate, 15–30 cm long, 10–25 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, without rhachilla extension or with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 6–9 mm long, 4 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 1–2 empty glumes, persistent, similar, shorter than spikelet.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 8 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent. Lemma margins ciliate, hairy above. Lemma apex acuminate. Palea chartaceous, 4–7 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate. Palea surface pubescent, hairy on back or on margins, hairy above. Apical sterile florets 1 in number, barren.

Flower and Fruit. Lodicules absent. Anthers 6, 3.5 mm long, anther tip smooth. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

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

Country /Province /State. **China, Eastern Asia.** China South Central, China Southeast. Taiwan. **Indo-China, Malesia.** Andaman Is, Laos, Myanmar, Thailand. Java, Malaya, Singapore, Moluccas, Philippines. **Mexico.** Southeast Mexico. **Mesoamerica, Caribbean, Western South America, Brazil.** Honduras, Panama. Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South.

TDWG4. Hong Kong. Yunnan.

Dendrocalamus bambusoides J.R. Xue & D.Z. Li. *J. Bamboo Res.*, 6(2): 16 (1987).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: Kunming, Western Hills, 1890 m, *Kunming Exped. 062* (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 36).

Derivation (Clifford & Bostock 2007): Gk *-oides*, resembling. Culms wooden resembling those of *Bambusa*.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 700–1500 cm long, 60–80 mm diam., woody, without nodal roots or rooting from lower nodes. Culm-internodes terete, thick-walled, 26–34 cm long, distally mealy. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement many, with 3 branches dominant. Culm-sheaths present, tardily deciduous or deciduous, 20–26 cm long, 1.5 times as long as wide, coriaceous, glabrous or pilose, without auricles. Culm-sheath ligule 2 mm high, dentate. Culm-sheath blade ovate, as wide as sheath at base, erect, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 14–17 cm long, 8–16 mm wide. Leaf-blade venation with 10–12 secondary veins, with distinct cross veins. Leaf-blade surface pilose, hairy abaxially. 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 sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 8–16 mm long, 3–5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the lower absent or obscure or two, persistent, similar, shorter than spikelet. Lower glume ovate, 5–7 mm long, chartaceous, without keels. Lower glume surface glabrous. Lower glume margins ciliate. Lower glume apex acute, mucronate. Upper glume ovate, 5–7 mm long, chartaceous, without keels. Upper glume surface glabrous. Upper glume margins ciliate. Upper glume apex acute, mucronate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 7–13 mm long, 4–7 mm wide, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, mucronate. Palea 6–14 mm long, chartaceous, 2-keeled but the uppermost without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 4–6 mm long. Filaments 20 mm long. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus barbatus C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 7(4):4 (1988).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: Mengla, June 1975, C.J. Hsueh 928 (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 38 as *Dendrocalamus barbatus* var. *barbatus*).

Derivation (Clifford & Bostock 2007): *L. barba*, beard; *-ata*, possessing. With hairs on the callus, glumes or lemma.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, nodding at the tip or pendulous at the tip, 1500–1800 cm long, 100–150 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thick-walled, 26–32 cm long, dark green, distally mealy or glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Branch complement many, with 3 branches dominant. Culm-sheaths present, deciduous, 25–38 cm long, coriaceous, pilose, with tawny hairs, auriculate, with 2–3 mm high auricles, with 5–15 mm wide auricles, setose on shoulders, shoulders with 10 mm long hairs. Culm-sheath ligule 3–8 mm high, dentate. Culm-sheath blade ovate, reflexed, 10–30 cm long, acuminate. Leaves 8–15 per branch. Leaf-sheaths pilose. Leaf-sheath auricles falcate. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–15 cm long, 10–20 mm wide. Leaf-blade venation with 10–12 secondary veins. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in oblong clusters, 1–2.2 cm long, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 6–8.5 mm long, 2–4 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two or several, 2–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, chartaceous, without keels. Upper glume apex acute.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 6–7 mm long, 4–5 mm wide, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, mucronate or awned, 1-awned. Principal lemma awn 0.8–1 mm long overall. Palea 5–6 mm long, chartaceous, 2-keeled but the uppermost without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 6 mm long, yellow, anther tip apiculate. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.
TDWG4. Yunnan (+).

Dendrocalamus bengkalisensis Widjaja. *Reinwardti*, 11(2): 69 (1997).

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

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Riau, Desa Pinggir Nature Reserve: *Widjaja 3995* (BO holo, K, L).

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

Derivation (Clifford & Bostock 2007): L. *-ensis*, denoting origin. From Bengkalis (Island), Sumatra, Indonesia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, pendulous at the tip, 40–60 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thin-walled, 35–40 cm long, distally mealy and pubescent. Lateral branches dendroid. Branch complement several, with 1 branch dominant. Culm-sheaths present, deciduous, 18.5–19.3 cm long, 0.75 times as long as wide, pubescent, with white hairs, concave at apex, auriculate, with 7–9 mm high auricles, setose on shoulders, shoulders with 7–25 mm long hairs. Culm-sheath ligule 2 mm high, dentate. Culm-sheath blade triangular, narrower than sheath, reflexed, 14.3–15.3 cm long, 23–27 mm wide, glabrous on surface. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose, 17 mm long. Leaf-sheath auricles erect, 1 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blade base cuneate, with a brief petiole-like connection to sheath. Leaf-blades lanceolate or oblong, 17–31.5 cm long, 15–68 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sumatra.

Dendrocalamus birmanicus A.Camus. *Bull. Mus. Hist. Nat. Paris*, Ser. 2, 4: 1044 (1932).

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).

TYPE from Myanmar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J.F. Rock 2066*, 25 Jan 1922–26 Jan 1922, Burma: Shan (US-1214447 (fragm.), US-1214446 (fragm.)).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 38).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Culm-internodes terete. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths pubescent. Ligule an eciliate membrane, truncate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–22 cm long, 23–35 mm wide. Leaf-blade venation with 1 secondary veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.5–3 cm long, dense, 0.5–1 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, compressed slightly, 7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two or several, 2–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, 1-keeled, keeled above. Lower glume margins ciliolate. Lower glume apex obtuse. Upper glume ovate, 4 mm long, chartaceous, 1-keeled, keeled above. Upper glume margins ciliolate. Upper glume apex obtuse.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 4.5–5.5 mm long, chartaceous, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex obtuse. Palea oblong, 1 length of lemma, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, 3 mm long, anther tip apiculate. Filaments united in a tube. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

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

Country /Province /State. China. China South Central. **Indo-China.** Myanmar.
TDWG4. Yunnan.

Dendrocalamus brandisii (Munro) Kurz. *For. Fl. Brit. Burma*, 2: 560 (1877).

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

Basionym or Replaced Name: *Bambusa brandisii* Munro, *Trans. Linn. Soc.* 26: 109 (1868). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. in Ind. or. Tenasserim, Martaban, Pegu, usque ad 4000 ped. s. m., praecipue in saxi calcareis, *Brandis* 2.

Illustrations (Books): S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 41).

Derivation (Clifford & Bostock 2007): in honor of Dietrich Brand (1824–1907) German-born Indian forester.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1900–3300 cm long, 130–200 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thick-walled, 30–38 cm long, grey. Lateral branches dendroid. Buds or branches present on lower part of culm. Culm-sheaths present, 40–60 cm long, 2 times as long as wide, coriaceous, pubescent, with white hairs, concave at apex, auriculate. Culm-sheath ligule 10–20 mm high, lacerate. Culm-sheath blade lanceolate, reflexed, 15–46 cm long, 80–130 mm wide, pubescent. Leaf-sheaths striately veined, pubescent. Leaf-sheath oral hairs scanty, deciduous. Ligule a ciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate or oblong, 20–30 cm long, 25–50 mm wide. Leaf-blade venation with 10–12 secondary veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1–1.5 cm long, dense, 2.5–4 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 1–2 empty glumes, persistent, similar, shorter than spikelet. Upper glume ovate, chartaceous, without keels. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma ovate, 4–5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface puberulous, hairy above. Lemma margins ciliate. Lemma apex acute. Palea chartaceous, 3 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent or 1 or 2, veined, ciliate. Anthers 6, yellow, anther tip apiculate or penicillate. Filaments united in a tube. Stigmas 1–2, plumose. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, ovoid, 2.5–4 mm long.

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

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** India (+). Andaman Is, Laos, Myanmar, Thailand, Vietnam.

TDWG4. Yunnan (+).

Dendrocalamus buar Widjaja. *Reinwardtia* 11(2): 70 (1997).

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

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Lampung, Balik Bukit: *Widjaja 3810* (BO holo, K, L, US).

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

Derivation (Clifford & Bostock 2007): The vernacular name of this species in Sumatra, Indonesia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms leaning, pendulous at the tip, 1500–2000 cm long, 60–100 mm diam., woody. Culm-internodes terete, thin-walled, 30–50 cm long, distally pruinose or pubescent. Lateral branches dendroid, arising from mid culm. Branch complement one, with 1 branch dominant. Culm-sheaths present, deciduous, 17–20.2 cm long, hispid, with white hairs or tawny hairs, auriculate, with 1–3 mm high auricles,

setose on shoulders, shoulders with 4–15 mm long hairs. Culm-sheath ligule 7–19 mm high, ciliate. Culm-sheath blade triangular, narrower than sheath, erect or reflexed, 9–21 cm long, 12–28 mm wide, glabrous on surface, acuminate. Leaf-sheath oral hairs scanty, 1–2 mm long. Leaf-sheath auricles erect, 1 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 18–29 cm long, 13–27 mm wide. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 lanceolate, laterally compressed, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate, 5 mm long.

Florets. Fertile lemma ovate, 6 mm long, chartaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acuminate, mucronate. Palea 7 mm long, chartaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, yellow. Stigmas 1, pubescent. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sumatra.

Dendrocalamus calostachyus (Kurz) Kurz. *For. Fl. Brit. Burma*, 2: 562 (1877).

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).

Basionym or Replaced Name: *Bambusa calostachya* Kurz, *J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist.* 42(2): 247–249 (1873).

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

Derivation (Clifford & Bostock 2007): Gk. kalos, beautiful; stachys, ear of corn. Inflorescence spike-like, attractive.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 2000–2500 cm long, woody. Culm-internodes terete, 30–40 cm long, distally pubescent. Lateral branches dendroid. Culm-sheaths present, pubescent, with appressed hairs, with tawny hairs, truncate at apex. Culm-sheath ligule entire. Leaf-sheaths striately veined, outer margin hairy. Ligule an eciliate membrane, entire or erose, truncate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 22–30 cm long, 30–65 mm wide. Leaf-blade venation with 18–26 secondary veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, lax, 1.5–5 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–15 mm long, 5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 2–3 empty glumes, persistent, similar, shorter than spikelet. Upper glume ovate, chartaceous, without keels. Upper glume lateral veins with cross-veins. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 7–8 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins with cross-veins. Lemma surface puberulous. Lemma apex acute. Palea chartaceous, 9 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, yellow, anther tip apiculate. Filaments united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent all over. Caryopsis with adherent pericarp.

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** Assam, India (+). Myanmar.

TDWG4. Yunnan.

Dendrocalamus cinctus Maj., Sod. & Ellis. *Smithsonian Contrib. Bot.*, 72: 45 (1988).

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

TYPE from Sri Lanka. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.H.M. Jayasuriya 868, 28 Sep 1972, Sri Lanka: North Central, Anuradhapura Dist. (US-2768725).

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

Images: *Smith. Contr. Bot.* No. 72 : 48 (1988).

Derivation (Clifford & Bostock 2007): with a girdle of tissue around the culm immediately above the nodal scar.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 300–600 cm long, 10–25 mm diam., woody. Culm-internodes terete, thick-walled, light green or dark green, smooth or scaberulous, distally glabrous or pubescent. Lateral branches dendroid. Bud complement 1. Branch complement many, in a horizontal line, with 1 branch dominant or 2 branches dominant, thinner than stem. Culm-sheaths present, deciduous, yellow or green, pubescent, hairy above, with dark brown hairs, hairy on margins, auriculate. Culm-sheath ligule 1.3 mm high, dentate. Culm-sheath blade lanceolate, demarcated but persistent, reflexed, 15–25 cm long, 10–20 mm wide, acuminate. Leaves 7–8 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent or falcate. Ligule an eciliate membrane, 2 mm long, pubescent on abaxial surface, erose, truncate. Collar with external ligule, ciliate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 18–30 cm long, 15–45 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins smooth or scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in oblong clusters, 1.5 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 lanceolate, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 7 mm long, chartaceous, without keels, 13 -veined. Lower glume apex acuminate. Upper glume ovate, 9.4 mm long, chartaceous, without keels, 16 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 11 mm long, chartaceous, without keel, 16 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma apex acute. Palea chartaceous, 8 -veined, 2-keeled. Palea keels puberulous, adorned above.

Flower and Fruit. Lodicules absent. Anthers 6, 6 mm long, orange. Filaments united in a tube. Stigmas 1–2, pubescent. Ovary umbonate. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Sri Lanka.

Dendrocalamus collettianus Gamble. *Ann. Bot. Gard. Calc.* 7: 93 (1896).

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 Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Culm-internodes terete. Lateral branches dendroid. Culm-sheaths present. Ligule an eciliate membrane.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 0.5–1 cm long, dense, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 6–8 mm long, coriaceous, without keels. Lower glume surface pubescent. Lower glume apex acute. Upper glume ovate, 6–8

mm long, chartaceous, without keels. Upper glume primary vein thickened. Upper glume surface pubescent. Upper glume apex acute.

Florets. Fertile lemma ovate, 8–12 mm long, chartaceous, without keel, 16–20 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex acute, mucronate. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Filaments united in a tube. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus detinens (Parker) H.B. Naithani & S.S.R. Bennet. *Indian Forester*, 117(1): 68 (1991).

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

TYPE from Myanmar. **Basionym or Replaced Name:** *Klemachloa detinens* R. Parker *Indian Forester* 58: 7 (1932). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: TYPE MATERIAL: *R.N. Parker 3130*, no date, Burma: Tenasserim, Mergui Dist. (US-790098).

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

Derivation (Clifford & Bostock 2007): *L. detineo*, *detain*.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 2000–3000 cm long, woody. Culm-internodes terete, 60 cm long, distally mealy or glabrous. Lateral branches dendroid. Culm-sheaths present, deciduous, 15 cm long. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, 3–5 mm long, glabrous on abaxial surface, truncate. Leaf-blade base cuneate, with a brief petiole-like connection to sheath. Leaf-blades lanceolate or oblong, 20–30 cm long, 40–60 mm wide, mid-green or glaucous, discolorous with last colour beneath. Leaf-blade venation with 18–20 secondary veins. Leaf-blade surface scaberulous, rough abaxially, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Upper glume lanceolate, 4–6 mm long, chartaceous, 9–15 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 5–7 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate. Palea 7 mm long, chartaceous, 2 -veined, 2-keeled but the uppermost without keels. Palea surface puberulous, hairy on back or on margins. Apical sterile florets barren.

Flower and Fruit. Lodicules 2 or 3, ciliate. Anthers 6, 4 mm long. Stigmas 1. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, oblong, 6 mm long, hairy at apex.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus dumosus (Ridley) Holttum. *Gard. Bull Singapore*, 11: 296 (1947).

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

TYPE from Singapore. **Basionym or Replaced Name:** *Schizostachyum dumosum* Ridl. *J. Straits Branch Roy. Asiat. Soc.* 61: 64 (1912). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Ridley 15903*, Rawei Island (K, Singapore).

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

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

Derivation (Clifford & Bostock 2007): *L. dumus*, thorn-bush; -osus, well developed. Habit decidedly bushy.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 20–25 mm diam., woody. Culm-internodes terete, thick-walled. Lateral branches dendroid. Culm-sheaths present, deciduous, 9–18 cm long, pubescent, with appressed hairs, with dark brown

hairs, auriculate, setose on shoulders, shoulders with 5 mm long hairs. Culm-sheath ligule 1.5 mm high, dentate or ciliate. Culm-sheath blade lanceolate, reflexed, 3–5 mm wide, acuminate. Leaf-sheath oral hairs scanty or lacking, 5–8 mm long. Ligule an eciliate membrane. Leaf-blade base cuneate or broadly rounded, without a false petiole or with a brief petiole-like connection to sheath, petiole 0.1–0.25 cm long. Leaf-blades lanceolate, 9–23 cm long, 9–30 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 lanceolate, laterally compressed, 7 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 4 empty glumes, persistent, similar, shorter than spikelet.

Florets. Fertile lemma ovate, 7 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate. Palea chartaceous, 7 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 3–6, 3.5 mm long. Stigmas 1, pubescent. Ovary umbonate, glabrous or with a few apical hairs. Caryopsis with adherent pericarp, 5.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Thailand. Malaya.

Dendrocalamus elegans (Ridley) Holttum. *Gard. Bull Singapore*, 11: 296 (1947).

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

TYPE from Malaya. **Basionym or Replaced Name:** *Schizostachyum elegans* Ridl. *J. Straits Branch Roy. Asiat. Soc.* 73: 146 (1916). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Malaya, Lankawi Is.: Haniff 785 (K iso).

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

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

Derivation (Clifford & Bostock 2007): *L. elegant*. Inflorescence attractive.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, drooping at the tip, 300–600 cm long, 10–25 mm diam., woody. Culm-internodes terete, thick-walled, 26–35 cm long, smooth. Lateral branches dendroid. Culm-sheaths present, deciduous. Culm-sheath blade lanceolate, acuminate. Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane, entire. Leaf-blade base cuneate or broadly rounded, with a brief petiole-like connection to sheath, petiole 0.05–0.15 cm long. Leaf-blades lanceolate, 6–12 cm long, 6–12 mm wide. Leaf-blade surface pubescent, densely hairy, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 8 mm long, 1.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

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

Florets. Fertile lemma ovate, 7 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute. Palea chartaceous, 4 -veined, without keels or 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, 2.5 mm long. Stigmas 1, plumose. Ovary umbonate, glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Malaya.

Dendrocalamus farinosus (Keng & Keng f.) L.C. Chia & H.L. Fung. *Acta Phytotax. Sin.*, 17(2): 215 (1980), *Acta Phytotax. Sin.*, 31(1): 61 (1993).

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).

TYPE from China. **Basionym or Replaced Name:** *Sinocalamus farinosus* Keng & Keng f. *J. Wash. Acad. Sci.* 36(3): 79 (1946). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: open fieldside in Fu-lu-guan, en route from Nanquan city to Pai-sha-ching, Nanquan Xian, 9 Sept. 1943, *Keng & son* 3896 (HT: Herb. Dept. Biol. Nat. Central U., Chongqing).

Recent Synonyms: *Dendrocalamus ovatus* N.H. Xia & L.C. Chia, *Acta Phytotax. Sin.*, 31(1): 61 (1993).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 44).

Derivation (Clifford & Bostock 2007): *L. farina*, flour; *-osa*, abundance. Surface of culms very waxy.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1000 cm long, 40–60 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thin-walled, 10–21 cm long, distally pruinose. Culm-nodes pubescent. Lateral branches dendroid. Bud complement 1. Branch complement many. Culm-sheaths present, deciduous, 15–21 cm long, 1 length of internode, coriaceous, brown or red, hispid, with appressed hairs, with black hairs, truncate at apex, without auricles, setose on shoulders, shoulders with 7–10 mm long hairs. Culm-sheath ligule 3–6 mm high, lacerate. Culm-sheath blade lanceolate, constricted at base, reflexed, 4–12 cm long, 5–12 mm wide, scabrid. Leaves 4–8 per branch. Leaf-sheaths 6–7.5 cm long, glabrous on surface. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.2 cm long. Leaf-blades oblong, 9–17 cm long, 15–25 mm wide. Leaf-blade venation with 10–14 secondary veins, with obscure cross veins. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, China Southeast.

TDWG4. Guangxi, Guizhou, Sichuan, Yunnan.

Dendrocalamus fugongensis C.J. Hsueh & D.Z. Li. *J. Bamboo Res.*, 7(4): 9 (1988).

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).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Yunnan: Fugong, 5 Oct. 1977, *T.P. Yi* 77301 (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 37).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 2000 cm long, 100–150 mm diam., woody, without nodal roots or rooting from lower nodes. Culm-internodes terete, thin-walled, 35–46 cm long, distally mealy. Lateral branches dendroid. Branch complement many, with 1 branch dominant. Culm-sheaths present, deciduous, 30–40 cm long, coriaceous, pilose, without auricles. Culm-sheath ligule 3 mm high, dentate. Culm-sheath blade ovate, erect, 10–18 cm long, pubescent, acuminate. Leaves 8–10 per branch. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs setose, deciduous, 5–7 mm long. Leaf-sheath auricles falcate. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 18–25 cm long, 30–42 mm wide. Leaf-blade venation with 16–27 secondary veins. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1–1.5 cm long, (2–)4–6.5 cm between clusters, with glumaceous subtending bracts, bracts 10–13 mm long, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–13 mm long, 3–4 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate, 8–10 mm long, chartaceous, without keels. Upper glume apex acute, mucronate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 10–12 mm long, 5–6 mm wide, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1 mm long overall. Palea 7–9 mm long, chartaceous, 2-keeled but the uppermost without keels. Palea apex acuminate.

Flower and Fruit. Lodicules absent. Anthers 6, yellow or purple. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus giganteus Munro. *Trans. Linn. Soc.* 26 :150 (1868).

Accepted by: R.J.Soreng et al., *Catalogue of 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).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Wallich s.n.*, Hab. in Pulo Penang

ST: *Brandis*, Tenasserim

LT: *Herb. Munro*, cult. in Bot. Gard. Calcutta (K). LT designated by Stapleton, *Edin. J. Bot.* 51: 23 (1994).

ST: *Anderson s.n.*, cult. in Bot. Gard. Calcutta

ST: *Anon.*, Hort. Sion et Kew.

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (773, Pl. 1515), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (51, Fig. 12), S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 43).

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

Derivation (Clifford & Bostock 2007): L. very large. Culms tall compared with those of related species.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 2000–3000 cm long, 200–300 mm diam., woody. Culm-internodes terete, thin-walled, 30–45 cm long. Lateral branches dendroid. Branch complement many, with 1 branch dominant, thinner than stem. Culm-sheaths present, deciduous, coriaceous, purple, pubescent, hairy throughout, with dark brown hairs, auriculate, glabrous on shoulders. Culm-sheath ligule 6–12 mm high, ciliate or dentate. Culm-sheath blade lanceolate, spreading. Leaves 5–15 per branch. Ligule an eciliate membrane, 3 mm long, erose. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–45 cm long, 30–60 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade margins scabrous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in stellate clusters, 2–2.5 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–8 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 12–15 mm long, 3–4 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume orbicular, 0.7–0.8 length of upper glume, chartaceous, without keels, 13 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acute. Upper glume oblate, 8–13 mm long, 1 length of adjacent fertile lemma, chartaceous, without keels, 15 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acute.

Florets. Fertile florets increasing in size upwards. Fertile lemma oblate, 8–13 mm long, chartaceous, without keel, 25 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma margins ciliate. Lemma apex acute. Palea 0.9 length of lemma, chartaceous, 6 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, 7–10 mm long, anther tip apiculate. Stigmas 1. Ovary umbonate, pubescent all over. Caryopsis with adherent pericarp, 7–8 mm long, hairy at apex.

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

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

Country /Province /State. Western Indian ocean. Mauritius (+), Madagascar (*), Seychelles. **China, Eastern Asia.** China South Central. Taiwan (+). **Indian Subcontinent, Indo-China, Malesia.** Assam, Bangladesh, Sri Lanka. Myanmar, Thailand (+), Vietnam. Malaya (+). **Mesoamerica, Caribbean, Brazil.** Panama.

TDWG4. Yunnan.

Dendrocalamus hait Widjaja. *Reinwardtia* 11(2): 72 (1997).

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

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sumatra, Sipirok: *Widjaja 3933* (BO holo, K, L).

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

Derivation (Clifford & Bostock 2007): From Haiti.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or leaning, pendulous at the tip, 2000 cm long, 45–55 mm diam., woody. Culm-internodes terete, thin-walled, 35–44 cm long, distally pruinose or pubescent. Lateral branches dendroid, arising from mid culm. Branch complement one, with 2 branches dominant or 3 branches dominant. Culm-sheaths present, deciduous, 19 cm long, 1 times as long as wide, hispid, with white hairs, concave at apex, auriculate, with obtuse auricles, with 5 mm high auricles, setose on shoulders, shoulders with 10–15 mm long hairs. Culm-sheath ligule 10 mm high, entire. Culm-sheath blade triangular, narrower than sheath, erect or reflexed, 2.3–5 cm long, 45–64 mm wide, glabrous on surface, acuminate. Leaf-sheath oral hairs ciliate, 6 mm long. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1–2 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 9.9–20.2 cm long, 12–15 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 lanceolate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 2–4 mm long. Upper glume ovate, 2–4 mm long.

Florets. Fertile lemma ovate, 5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acuminate. Palea 5 mm long, chartaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 6 mm long, yellow. Filaments free. Stigmas 1, pubescent. Ovary umbonate, glabrous or pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sumatra.

Dendrocalamus hamiltonii Nees & Arn. ex Munro. *Trans. Linn. Soc.* 26: 151 (1868).

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).

TYPE from Assam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Buch.-Hamilton 882*, 17 Jul 1808, Assam: Goalpara (E). LT designated by Stapleton, *Edin. J. Bot.* 51: 23 (1994).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (482, Fig. 1 & 488, Fig. 2), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 40).

Derivation (Clifford & Bostock 2007): of Francis Hamilton (nie Buchanan) Scots-born Indian physician and botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or arching, 1200–2000 cm long, 100–185 mm diam., woody, with root dots on the nodes. Culm-internodes terete, thick-walled, 30–50 cm long, dark green or grey, distally pubescent. Lateral branches dendroid. Buds or branches absent from lower part of culm. Culm-sheaths present, 35–45 cm long, 2 times as long as wide, antrorsely scabrous, glabrous or hispid, with dark brown hairs, truncate at apex. Culm-sheath ligule entire. Culm-sheath blade lanceolate or narrowly ovate, narrower than sheath, 15–30 cm long. Leaf-sheaths keeled, hispid, hairs white. Ligule an eciliate membrane. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–37 cm long, 20–40 mm wide. Leaf-blade venation with 12–34 secondary veins. Leaf-blade surface scabrous, rough abaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.7–3.2 cm long, dense, 2.5 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

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

Florets. Fertile lemma orbicular, 7–8 mm long, chartaceous, purple, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex acute. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, purple, anther tip with extended connective. Filaments united in a tube. Stigmas 3, plumose. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, ovoid, glabrous or hairy at apex.

N = 35 (2 refs TROPICOS).

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** Assam, Bangladesh, Eastern Himalaya, India, Nepal. Laos, Myanmar, Thailand, Vietnam.

TDWG4. Yunnan. Bhutan, Sikkim. Assam, Meghalaya. Uttah Pradesh, West Bengal.

Dendrocalamus hirtellus Ridley. *Journ. As. Soc. Straits*, 73: 146 (1916).

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

TYPE from Singapore. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: NT: *Henderson SFN-38201*, Johore: near Labis (K, Singapore).

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

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

Derivation (Clifford & Bostock 2007): *L. hirtus*, hairy; -ellus, diminutive. Plants with slightly hairy leaves or spikelets.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, drooping at the tip, 1000–1500 cm long, woody. Culm-internodes terete, distally pruinose. Lateral branches dendroid. Culm-sheaths present, deciduous, yellow or green, glabrous or pubescent, with tawny hairs, auriculate, with 3 mm high auricles, setose on shoulders, shoulders with straight hairs, shoulders with 20–25 mm long hairs. Culm-sheath ligule dentate. Culm-sheath blade narrowly ovate to ovate, 18 cm long, 25 mm wide, acuminate. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs setose, 10–15 mm long. Ligule an eciliate membrane, 1–2 mm long, erose. Leaf-blade base cuneate or broadly rounded, with a brief petiole-like connection to sheath, petiole 1 cm long. Leaf-blades lanceolate, 20–40 cm long, 30–60 mm wide. Leaf-blade surface pubescent, densely hairy, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 2.5 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 2 empty glumes, persistent, similar, shorter than spikelet. Upper glume 7 mm long.

Florets. Fertile lemma ovate, 7.5 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate. Palea chartaceous, 4–7 -veined, without keels or 2-keeled but the uppermost without keels. Palea keels eciliate.

Flower and Fruit. Lodicules absent. Anthers 6, 4 mm long, anther tip smooth. Filaments free or united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Malaya.

Dendrocalamus hookeri Munro. *Trans. Linn. Soc.* 26: 151 (1868).

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>: *vide* TROPICOS and Kew Synonymy Database: LT: *J.D. Hooker & Thomson 411*, 11 Jun 1850, India: Bengal orient, Pundua (K; ILT: US-2380247). LT designated by Stapleton, *Edin. J. Bot.* 51: 26 (1994).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (488, Fig. 1).

Derivation (Clifford & Bostock 2007): In honor of Joseph Dalton Hooker (1817–1911) English botanist, traveller and Graden's Director.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1500–2000 cm long, 100–150 mm diam., woody. Culm-internodes terete, thick-walled, 40–45 cm long, dark green, distally pilose. Lateral branches dendroid. Buds or branches absent from lower part of culm. Culm-sheaths present, 20–30 cm long, 0.5–0.75 times as long as wide, hispid, with dark brown hairs or black hairs, ciliate on shoulders. Culm-sheath ligule 5–7 mm high, dentate. Culm-sheath blade triangular, 8–18 cm long. Leaf-sheaths striately veined, pilose (below). Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane, truncate. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades oblong. Leaf-blade midrib conspicuous. Leaf-blade venation indistinct, with 16–32 secondary veins. Leaf-blade surface scabrous, rough abaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 2.5 cm long, dense, 5–8 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 8–10 mm long, 3 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

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

Florets. Fertile lemma ovate, 8 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins with cross-veins. Lemma surface puberulous. Lemma apex acute. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip penicillate. Filaments united in a tube. Stigmas 1, plumose. Ovary umbonate, pubescent all over. Caryopsis with adherent pericarp.

N = 36 (2 refs TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, Eastern Himalaya, India. Myanmar. TDWG4. Bhutan, Sikkim. Assam, Meghalaya. Uttar Pradesh.

Dendrocalamus jianshuiensis C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 7(4): 14 (1988).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: native to Huang Chao Ba, Jianshui, 1440 m, 18 Nov. 1978, *c.i.* 5 (HT: SWFC).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 1700–1800 cm long, 100–120 mm diam., woody, without nodal roots or rooting from lower nodes. Culm-internodes terete, thin-walled, 25–37 cm long. Lateral branches dendroid. Branch complement many. Culm-sheaths present, deciduous, 1 length of internode, coriaceous, truncate at apex, auriculate, with 1 mm high auricles, with 5–20 mm wide auricles. Culm-sheath ligule 1–4 mm high, dentate. Culm-sheath blade triangular, reflexed, 10–20 cm long, 35–75 mm wide, pubescent, acuminate. Leaves 9 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 2 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 20–30 cm long, 35–85 mm wide. Leaf-blade venation with 18–26 secondary veins. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 2.2–7.5 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 6–7 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–18 mm long, 5–10 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 1–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 5–8 mm long, chartaceous, without keels. Lower glume surface puberulous. Lower glume apex acute, mucronate. Upper glume ovate, 5–8 mm long, chartaceous, without keels. Upper glume surface pubescent. Upper glume apex acute, mucronate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 7–12 mm long, 5–10 mm wide, chartaceous, without keel, more than 3-veined. Lemma apex acuminate. Palea 6–9 mm long, chartaceous, 2-keeled but the uppermost without keels. Palea apex dentate, 2-fid.

Flower and Fruit. Lodicules absent. Anthers 6, 4–6 mm long, yellow, anther tip apiculate. Filaments 10–14 mm long. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus khoonmengii Sungkaew, Teerawat. & Hodk. *Thai Forest Bull., Bot.* 35: 99 (2007).

TYPE from Thailand. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Thailand, Lasaka district, Khaoluang Nat. Park, Nakhon Si Thammarat: *Wong, Thapayai & Rois WKM 2868* (BKF holo, K, KLU).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, drooping at the tip, 1000–1300 cm long, 30–40 mm diam., woody, without nodal roots. Culm-internodes terete, thin-walled, 35–50 cm long, mid-green, distally pruinose. Culm-nodes flush with internodes. Lateral branches dendroid, arising from mid culm. Branch complement several, with 1 branch dominant. Culm-sheaths present, deciduous, 15–25 cm long, 2 times as long as wide, coriaceous, green or brown or red, hispid, with black hairs, convex at apex, auriculate, with acute auricles, with 10–15 mm high auricles, with 2–7 mm wide auricles, setose on shoulders, shoulders with straight hairs, shoulders with 7–20 mm long hairs. Culm-sheath ligule 5 mm high, ciliolate. Culm-sheath blade lanceolate, spreading or reflexed, 15–20 cm long, 20 mm wide, glabrous on surface. Leaves 5–10 per branch. Leaf-sheaths 2–3 cm long. Leaf-sheath oral hairs scanty, curly, 2–3.5 mm long. Leaf-sheath auricles absent. Ligule an eciliate membrane, 0.1–0.3 mm long, erose. Leaf-blade base without a false petiole or with a brief petiole-like connection to sheath, petiole 0.05–0.1 cm long. Leaf-blades lanceolate, 5–12 cm long, 4–12 mm wide. Leaf-blade venation with 4–8 secondary veins. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus latiflorus Munro. *Trans. Linn. Soc.* 26 : 152. t. 6. (1868).

Accepted by: R.J.Soreng et al., *Catalogue of 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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: (US-2875367).

ST: *Hance 740*, China

ST: *Harland s.n.*, China

ST: *Oldham 649*, Formosa.

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (775, Pl. 1516), D.Farrelly, *The Book of Bamboo* (1984), S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 150 mm diam., woody. Culm-internodes terete, thin-walled, distally glabrous. Lateral branches dendroid. Culm-sheaths present, 25–30 cm long, 1 times as long as wide, brown, hispid, with appressed hairs, with black hairs. Culm-sheath ligule 5 mm high, dentate. Leaf-sheaths glabrous on surface or

hirsute, outer margin hairy. Ligule an eciliate membrane, obtuse or acute. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 18–25 cm long, 30–75 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 12–18 secondary veins, with distinct cross veins. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, lax, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 6–8 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 15–20 mm long, 10–12 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 5 mm long, chartaceous, without keels. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 10 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins with cross-veins. Lemma surface pubescent. Lemma margins ciliate. Lemma apex acute. Palea chartaceous, 5 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate or pubescent. Filaments united in a tube. Stigmas 1–2, plumose. Ovary umbonate, pubescent all over. Caryopsis with adherent pericarp.

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

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

Country /Province /State. **China, Eastern Asia.** China South Central, Hainan, China Southeast. Nansei-Shoto, Ogosawara-shoto, Taiwan. **Indo-China.** Cambodia, Myanmar, Vietnam. **Brazil.** Brazil Southeast.

TDWG4. Fujian, Guangdong, Guangxi, Jiangsu (+), Zhejiang (+). Guizhou, Sichuan, Yunnan.

Dendrocalamus liboensis C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 8,1:37 (1989).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Guizhou: Libo, 350 m, 8 Oct. 1978, *J.Q. Zhang & F.D. Liu* 78022 (HT: SWFC; IT: GZFI).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 1200–1500 cm long, 60–90 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thin-walled, 32–36 cm long, distally mealy and pilose. Lateral branches dendroid. Branch complement several. Culm-sheaths present, deciduous, 30–36 cm long, coriaceous, hispid, with appressed hairs, with dark brown hairs, auriculate, with 2 mm high auricles, setose on shoulders, shoulders with 5–10 mm long hairs. Culm-sheath ligule 2–3 mm high, fimbriate. Culm-sheath blade lanceolate, constricted at base, reflexed, 12 cm long, 15 mm wide, pubescent. Leaves 3–9 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1 mm long. Leaf-blade base cuneate, with a brief petiole-like connection to sheath. Leaf-blades oblong, 8–40 cm long, 15–85 mm wide. Leaf-blade venation with 12–24 secondary veins. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. **China.** China South Central.

TDWG4. Guizhou.

Dendrocalamus longifimbriatus Gamble. *Ann. Bot. Gard. Calc.* 7: 92 (1896).

Regarded by K as a synonym (*D. membranaceus*).

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

TYPE from Myanmar. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Burma, Mergui: Coll? (K lecto).

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

Derivation (Clifford & Bostock 2007): *L. longus*, long; *fimbriae*, fringe; -ata, possessing.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1000–1800 cm long, 60–100 mm diam., woody. Culm-internodes terete. Lateral

branches dendroid. Branch complement several. Culm-sheaths present, 7–15 cm long, coriaceous, hispid, with dark brown hairs, auriculate, with 10 mm high auricles, with 20 mm wide auricles, setose on shoulders, shoulders with 10–15 mm long hairs. Culm-sheath ligule ciliolate. Culm-sheath blade ovate, 2.5–3.5 cm long, acuminate. Leaf-sheaths hispid. Leaf-sheath oral hairs setose, 10 mm long. Leaf-sheath auricles falcate. Ligule a ciliolate membrane. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 1–1.2 cm long. Leaf-blades lanceolate or oblong or ovate, 20–35 cm long, 40–60 mm wide. Leaf-blade venation with 24–36 secondary veins. Leaf-blade surface smooth, glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 0.5–0.75 cm long, dense, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 3 mm long. Upper glume ovate, 3.5 mm long, chartaceous, without keels. Upper glume apex acute.

Florets. Fertile lemma ovate, 3–4 mm long, chartaceous, keeled, more than 3-veined. Lemma apex acute, muticous or mucronate. Palea oblong, 2-keeled but the uppermost without keels. Palea keels ciliolate.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Filaments united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, ovoid.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. India. Myanmar, Thailand.

Dendrocalamus longispathus (Kurz) Kurz. *Prelim. Rep. For. Veg. Pegu App. B* :94 (1875).

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

TYPE from Myanmar. **Basionym or Replaced Name:** *Bambusa longispatha* Kurz *J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist.* 42(2): 250 (1873). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Burma, Pegu: Coll?.

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

Derivation (Clifford & Bostock 2007): *L. longus*, long; *spatha*, spatula. Inflorescence bracts long and leafy.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1000–1800 cm long, 60–100 mm diam., woody, without nodal roots or with aerial roots from the nodes. Culm-internodes terete, thick-walled, 25–60 cm long, glaucous or grey, distally pubescent. Lateral branches dendroid. Buds or branches absent from lower part of culm. Culm-sheaths present, persistent, 35–50 cm long, 2–3 times as long as wide, chartaceous, hispid, with dark brown hairs, concave at apex, without auricles. Culm-sheath ligule dentate or fimbriate. Culm-sheath blade lanceolate, reflexed, 25–40 cm long, 25–35 mm wide, pubescent, acuminate. Leaf-sheaths pubescent, hairs dark brown, outer margin hairy. Leaf-sheath auricles absent or falcate. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 10–30 cm long, 25–45 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 16–20 secondary veins. Leaf-blade surface scabrous, rough abaxially, glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in oblong clusters, dense, 1.3–3.8 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafy between clusters or leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated between glumes, suppressed between florets.

Glumes. Glumes several, 2–3 empty glumes, persistent, shorter than spikelet. Upper glume obovate, chartaceous, without keels. Upper glume apex obtuse.

Florets. Fertile lemma obovate, 4–6 mm long, chartaceous, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex acute. Palea chartaceous, 4 -veined, 2-keeled but the uppermost without keels. Palea surface puberulous.

Flower and Fruit. Lodicules absent. Anthers 6, yellow, anther tip apiculate. Filaments united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, ovoid.

$2n = 70$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, Bangladesh, India. Myanmar, Thailand.

TDWG4. West Bengal.

Dendrocalamus macroculmis (Riviere) Lehaie. *Le Bambou*, 2 : 263, 284 (1908).

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

TYPE from Algeria. **Basionym or Replaced Name:** *Bambusa macroculmis* A.Riviere, *Bull. Soc. Natl. Acclim. France* 5: 624 (1878). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Algeria, Cult. at Hamma: Coll?.

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

Derivation (Clifford & Bostock 2007): Gk. makros, large; L. culmus, stalk. Culms large.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Culm-internodes terete, dark green or brown, distally pubescent. Lateral branches dendroid. Culm-sheaths present, brown or red, distinctly mottled with last colour, hairy on margins. Culm-sheath ligule fimbriate. Culm-sheath blade linear, 10–20 cm long. Leaves 8–10 per branch. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–25 cm long, 40–50 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate. Upper glume ovate.

Florets. Fertile lemma ovate, 4–7 mm long, membranous, without keel, 13–17 -veined, more than 3-veined. Lemma margins convolute, ciliolate. Lemma apex obtuse, mucronate. Palea membranous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent or 1. Anthers 6. Filaments free. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus membranaceus Munro. *Trans. Linn. Soc.* 26: 149 (1868).

More checking of status required.

Accepted by: R.J.Soreng et al., *Catalogue of 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).

TYPE from Myanmar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Wallich Cat.* 5029, 12 Mar 1827, Burma: Martaban, Troglia (K; ILT: K-W). LT designated by Stapleton & Xia, *Kew Bull.* 52: 238 (1997).

ST: *Brandis s.n.*, Tenasserim

ST: *Lobb s.n.*, Tenasserim.

Recent Synonyms: *Bambusa membranacea* (Munro) C.M.A.Stapleton & N.H.Xia, *Kew Bull.*, 52(1): 238 (1997).

Illustrations (Books): S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 35).

Derivation (Clifford & Bostock 2007): L. membrana, membrane; -acea, resembling. Inflorescence bracts or glumes papery.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 2000–2300 cm long, 60–100 mm diam., woody, with aerial roots

from the nodes. Culm-internodes terete, 23–38 cm long, distally pruinose. Lateral branches dendroid. Culm-sheaths present, 30–50 cm long, 2 times as long as wide, glabrous or hispid, with appressed hairs, with dark brown hairs, auriculate. Culm-sheath ligule 5–10 mm high, dentate. Culm-sheath blade lanceolate, reflexed, 30–40 cm long, 25 mm wide, pubescent, acuminate. Leaf-sheaths keeled, striately veined. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule an eciliate membrane, pubescent on abaxial surface, obtuse. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 12–25 cm long, 12–20 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 8–14 secondary veins. Leaf-blade surface hispid, hairy adaxially. Leaf-blade margins scabrous (retrorsely). Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.7–2.5 cm long, dense, 2.5–5 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, compressed slightly, 10–12 mm long, 2–5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute or acuminate. Upper glume ovate, chartaceous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 7–9 mm long, chartaceous, shiny, without keel, more than 3-veined. Lemma margins eciliate or ciliate. Lemma apex acute, mucronate. Palea 1 length of lemma, chartaceous, 5 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, yellow, anther tip apiculate. Filaments united in a tube. Stigmas 1, plumose. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, ovoid, sulcate on hilar side, 5–8 mm long.

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

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

Country /Province /State. China. China South Central. **Indo-China.** Laos, Myanmar, Thailand, Vietnam.

TDWG4. Yunnan.

Dendrocalamus merrillianus (Elmer) Elmer. *Leaflets Philipp. Bot.* 7: 2671 (1915).

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

TYPE from Philippines. **Basionym or Replaced Name:** *Gigantochloa merrilliana* Elmer, *Leaflets Philipp. Bot.* 1: 273 (1908). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Philippine Is., Leyte: Elmer 7283 (K iso).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Culm-internodes terete. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths scaberulous, glabrous on surface. Ligule an eciliate membrane, 0.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long. Leaf-blades lanceolate, 14–22 cm long, 20–40 mm wide, mid-green and glaucous, discolourous with last colour beneath. Leaf-blade midrib conspicuous. Leaf-blade venation with 18 secondary veins, without cross veins. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade margins smooth. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 0.6–0.8 cm long, dense, 0.7–1 cm between clusters, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, compressed slightly, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes 5 empty glumes, persistent, similar, shorter than spikelet. Lower glume orbicular, 2 mm long, chartaceous, without keels, 9–11 -veined. Lower glume apex obtuse. Upper glume orbicular, 2 mm long, chartaceous, without keels, 9–11 -veined. Upper glume apex obtuse.

Florets. Fertile lemma orbicular, 3 mm long, chartaceous, without keel, rounded except near apex, 17–19 -veined, more than 3-veined. Lemma surface glabrous. Lemma margins ciliolate. Lemma apex obtuse. Palea 1 length of lemma, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, 3 mm long, anther tip apiculate. Filaments united in a tube. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dendrocalamus messeri Blatter. *Indian Forester*, 5: 595 (1929).

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

TYPE from Myanmar. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Burma, Katha: Messer.

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 2400–3000 cm long, 127 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thick-walled, 30–53 cm long. Lateral branches dendroid, arising from lower culm. Culm-sheaths present, 45 cm long, glabrous. Culm-sheath ligule dentate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20–23 cm long, 25 mm wide. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 0–1 basal sterile florets, 8–10 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 18 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

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

Florets. Basal sterile florets absent or 1, male. Fertile lemma orbicular, 14 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acute. Palea chartaceous, 2-keeled but the uppermost without keels.

Flower and Fruit. Lodicules absent. Anthers 6. Filaments united in a tube. Stigmas 3. Ovary pubescent all over. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus minor (McClure) L.C. Chia & H.L. Fung. *Acta Phytotax. Sin.*, 18(2): 21 (1980).

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).

TYPE from China. **Basionym or Replaced Name:** *Sinocalamus minor* McClure *Sunyatsenia* 6(1): 47–51, pl. 11–12 (1941)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Guangdong/Guangxi,.

Recent Synonyms: *Dendrocalamus sapidus* Q.H. Dai & D.Y. Huang, *J. Bamboo Res.*, 14(3): 1 (1995).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 44).

Derivation (Clifford & Bostock 2007): L. lesser. Plants small in comparison with related species.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 150–300 cm long, woody. Culm-internodes terete, distally glabrous. Lateral branches suffrutescent. Culm-sheaths present. Leaf-sheaths glabrous on surface, outer margin glabrous. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 15–18 cm long, 40–55 mm wide. Leaf-blade venation with 20–24 secondary veins, with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile.

Spikelets ovate, laterally compressed, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

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

Florets. Fertile florets increasing in size upwards. Fertile lemma orbicular, 9–11 mm long, chartaceous, purple, without keel, more than 3-veined. Lemma surface glabrous or puberulous. Lemma margins ciliate. Lemma apex apiculate. Palea 6–8 mm long, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate. Palea surface puberulous, hairy on back and on flanks. Palea apex truncate.

Flower and Fruit. Lodicules absent. Anthers 6, 5 mm long, yellow, anther tip with extended connective. Filaments free. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp, oblong, hairy at apex, apex rostrate.

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

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, China Southeast.

TDWG4. Guangdong, Guangxi. Guizhou.

Dendrocalamus nudus Pilger. Fedde, *Repert. Nov. Sp.* 3: 117 (1906).

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: Siam: Djieng-Mai-Ebene Schwemmland, 300 m, hdufig auch angepflanzt, blhend im Januar 1905, *Hosseus 290a*.

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

Derivation (Clifford & Bostock 2007): L. bare. Leaf-sheaths glabrous.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 800 cm long, 20 mm diam., woody. Culm-internodes terete. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent. Ligule an eciliate membrane. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 30 cm long, 40–50 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface puberulous, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 2 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or ovate, laterally compressed, 9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate.

Florets. Fertile lemma ovate, 6–7 mm long, chartaceous, without keel, more than 3-veined. Lemma apex mucronate. Palea ovate, 5–6 mm long, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliolate. Palea apex obtuse.

Flower and Fruit. Lodicules absent. Anthers 6, 4 mm long, anther tip smooth. Filaments free. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus pachystachys C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 8(1): 25 (1989).

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).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Yunnan: Huangjia Ying, Chengjiang, *C.J. Hsueh 1124* (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 45).

Derivation (Clifford & Bostock 2007): Gk *pachys*, thick; *stachys*, spike as of an ear of wheat. Spikelets densely beset with spikelets and bristles.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, erect at the tip or inclined at the tip, 1000–1200 cm long, 100 mm diam., woody,

with aerial roots from the nodes. Culm-internodes terete, thick-walled, 39–47 cm long. Lateral branches dendroid. Branch complement many. Culm-sheaths present, deciduous, coriaceous, glabrous, without auricles. Culm-sheath ligule 3 mm high, dentate. Culm-sheath blade ovate, reflexed, 6–12 cm long, acuminate. Leaves 10–15 per branch. Leaf-sheaths pilose. Ligule an eciliate membrane, 3–5 mm long, erose. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 20–40 cm long, 60–120 mm wide. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in stellate clusters, 1.2–3 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–8 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 17–28 mm long, 5–10 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two or several, 2–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute, mucronate. Upper glume ovate, chartaceous, without keels. Upper glume apex acute, mucronate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 7.5–12.5 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, mucronate. Palea 1 length of lemma, chartaceous, 2-keeled but the uppermost without keels. Palea apex dentate, 2-fid.

Flower and Fruit. Lodicules absent. Anthers 6, 6–7 mm long, yellow. Filaments 7–11 mm long. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus parishii Munro. *Trans. Linn. Soc.* 26: 149 (1868).

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).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. in Ind. or punjab, himalaya, *Parish s.n.*.

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

Derivation (Clifford & Bostock 2007): In honor of Charles Samuel Pollock Parish (1822–1897) cleric and Indian botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Culm-internodes terete. Lateral branches dendroid. Culm-sheaths present. Ligule an eciliate membrane.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.5–3 cm long, dense, with glumaceous subtending bracts, bracts 6–10 mm long, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 7–10 mm long, 5–7 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the lower absent or obscure or two, 1–2 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 4 mm long, coriaceous, without keels. Lower glume surface puberulous, hairy at apex. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, 4 mm long, chartaceous, without keels. Upper glume surface puberulous, hairy at apex. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile lemma ovate, 6 mm long, chartaceous, without keel, 11–13 -veined, more than 3-veined. Lemma lateral veins with cross-veins. Lemma margins ciliate. Lemma apex acute, mucronate. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliolate. Palea surface pilose.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip with extended connective. Filaments united in a tube. Stigmas 1. Ovary pubescent all over. Caryopsis with adherent pericarp, obovoid.

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

Country /Province /State. China. China South Central. **Indian Subcontinent.** India, Pakistan.

TDWG4. Yunnan.

Dendrocalamus parvigemma N.H. Xia, V.T. Nguyen & V.L. Le

. *Nordic J. Bot.* 29: 221–222, f. 1 & 2 (2011).

TYPE from Vietnam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Phu Tho province, Doan Hung District, Van Don Commune, cultivated in household gardens, hill, 80 m, 9 April 2009 HT: Forest Science Inst. of Vietnam; IT: IBSC

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, erect at the tip or nodding at the tip, 1000–1200 cm long, 100–120 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thick-walled, 35–45 cm long, mid-green, distally glabrous. Culm-nodes swollen, without exudate. Lateral branches dendroid, arising from upper culm. Bud complement 1. Branch complement several, with 1 branch dominant. Culm-sheaths present, deciduous, 24–30 cm long, 0.75 times as long as wide, coriaceous, brown, pilose, with appressed hairs, with dark brown hairs, auriculate, with 6–8 mm high auricles, setose on shoulders, shoulders with 4.5 mm long hairs. Culm-sheath ligule dentate. Culm-sheath blade lanceolate, reflexed, 4.5–5.5 cm long, 25–30 mm wide, pubescent (beneath). Leaves (7–)10–12(–16) per branch. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 32–40 cm long, 50–120 mm wide. Leaf-blade venation with 32 secondary veins. Leaf-blade surface scabrous, rough adaxially, puberulous, hairy adaxially.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, lax, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, with 1-keeled prophylls, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 3–5 empty glumes, persistent, similar, shorter than spikelet. Upper glume ovate, 5–10 mm long, chartaceous, without keels. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 12–17 mm long, 8–12 mm wide, coriaceous, dark brown or black, without keel, more than 3-veined. Lemma surface pilose. Lemma margins ciliate. Lemma hairs white. Lemma apex obtuse. Palea oblong, 1.4–1.6 mm long, 7 -veined, 2-keeled but the uppermost without keels. Palea surface pilose, hairy on back.

Flower and Fruit. Lodicules absent. Anthers 6, 6.5–7 mm long, yellow, anther tip pubescent. Filaments free, 7 mm long. Stigmas 1, plumose. Styles 8.5–13 mm long.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus peculiaris C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 8(1): 32 (1989).

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).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Yunnan: Jingping, 23 Aug. 1976, C.J. Hsueh 846 (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 41).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 1300–1800 cm long, 100–150 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thick-walled, 36–43 cm long. Lateral branches dendroid. Branch complement many, with 1 branch dominant. Culm-sheaths present, tardily deciduous or deciduous, coriaceous, hispid, with white hairs or red hairs, without auricles. Culm-sheath ligule 6–10 mm high, dentate. Culm-sheath blade ovate, spreading, acuminate. Leaves 8–15 per branch. Leaf-sheaths deciduous, pilose, outer margin hairy. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 28–40 cm long, 30–55 mm wide. Leaf-blade venation with 18–24 secondary veins. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.8–3.4 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–12 mm long, 5–8 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

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

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 7–11 mm long, 7–8 mm wide, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, mucronate. Palea 6–8 mm long, chartaceous, 2-keeled but the uppermost without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 3–3.5 mm long, yellow. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus pendulus Ridley. *Journ. As. Soc. Straits*, 44: 210 (1905).

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

TYPE from Malaya. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Malaya, Pahang: Ridley 8482.

Illustrations (Books): S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995).

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

Derivation (Clifford & Bostock 2007): *L. pendulus*, hanging down. Spikelets or inflorescence branches pendant.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms leaning, pendulous at the tip, 2000–3000 cm long, 90 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, dark green. Lateral branches dendroid. Culm-sheaths present, deciduous, 15–25 cm long, olive green, pubescent, auriculate, with 3–4 mm high auricles, setose on shoulders, shoulders with 15–20 mm long hairs. Culm-sheath ligule 5–10 mm high, dentate. Culm-sheath blade ovate, narrower than sheath, erect or spreading, 25 cm long, 80 mm wide, glabrous on surface, acuminate. Leaf-sheath oral hairs lacking or setose, 5–10 mm long. Ligule an eciliate membrane. Leaf-blade base truncate or broadly rounded, with a brief petiole-like connection to sheath, petiole 0.2–0.6 cm long. Leaf-blades lanceolate, 15–30 cm long, 20–30 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 lanceolate, laterally compressed, 10 mm long, breaking up at maturity, disarticulating below each fertile floret.

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

Florets. Fertile lemma ovate, 8–9 mm long, chartaceous, without keel, 12 -veined, more than 3-veined. Lemma apex acuminate. Palea chartaceous, 4 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 4 mm long, anther tip smooth. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, 4 mm long. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Malaya.

Dendrocalamus poilanei A.Camus. *Bull. Mus. Hist. Nat. Paris*, 1: 205 (1925).

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

TYPE from Vietnam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Annam: Cana, pr. Phanrang, *Poilane 8463* (HT: P).

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

Derivation (Clifford & Bostock 2007): In honor of Eugène Poilane (1888–1964) French botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 500–600 cm long, 5–10 mm diam., woody. Culm-internodes terete, smooth, distally glabrous. Lateral branches dendroid. Culm-sheaths present, glabrous, without auricles, glabrous on shoulders. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, truncate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–9 cm long, 6 mm wide, glaucous. Leaf-blade venation with 6 secondary veins, without cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 0.5–0.7 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, compressed slightly, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the lower absent or obscure or two or several, 1–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, 2.5 mm long, chartaceous, without keels. Lower glume apex obtuse. Upper glume ovate, 3.5 mm long, chartaceous, without keels, 5 -veined. Upper glume apex obtuse.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 4.5–5 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface scaberulous, rough above, glabrous. Lemma apex obtuse, mucronate. Palea 4 mm long, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6, 3.5 mm long, anther tip apiculate. Filaments united in a tube. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus pulverulentus L.C. Chia & P.P.H. But. *Kew Bull.*, 43(1): 115 (1988).

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).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Guangdong: Tai Po Kau Nature Reserve, Hong Kong, *Nan-Zhu 2780* (HT: IBSC; IT: A, CUHK, K).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 39).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 800 cm long, 40–70 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, 25–30 cm long, distally pruinose. Lateral branches dendroid. Buds or branches absent from lower part of culm. Branch complement several, with 1 branch dominant. Culm-sheaths present, deciduous, hispid, with appressed hairs, with tawny hairs, hairy on margins, without auricles or auriculate, with 2 mm high auricles, with 1 mm wide auricles, ciliate on shoulders, shoulders with 1–1.5 mm long hairs. Culm-sheath ligule 4 mm high. Culm-sheath blade lanceolate, spreading. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1 mm long, erose, obtuse. Leaf-blade base cuneate, with a brief petiole-like connection to sheath. Leaf-blades oblong, 13–20 cm long, 25–40 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

Guangdong.

Dendrocalamus ronganensis Q.H. Dai & D.Y. Huang. *J. Bamboo Res.* 14(3): 3–4, f. 2. 1995.

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

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Guangxi: Rongan, 30 July 1993, *Q.H. Dai & D.Y. Huang 930802* (HT: Guangxi Academy of Forestry).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, China Southeast.

TDWG4. Guangxi, Guizhou, Sichuan.

Dendrocalamus sahnii H.B. Naithani & K.N. Bahadur. *Indian Forester*, 108(3): 212 (1982).

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>: *vide* TROPICOS and Kew Synonymy Database: India, Zoram: Naithani ser.2: 902 (DD holo).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 300 cm long, 20–30 mm diam., woody. Culm-internodes terete, 8–20 cm long, distally glabrous. Lateral branches dendroid. Culm-sheaths present, 15–20 cm long, 2 times as long as wide, coriaceous, hispid, with dark brown hairs, truncate at apex. Culm-sheath ligule 3–5 mm high, lacerate. Culm-sheath blade lanceolate, 2–2.5 cm long. Ligule an eciliate membrane.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 2–3 cm long, dense, 5–9 cm between clusters, with spathaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–15 mm long, 4.5–5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 1-keeled. Lower glume primary vein ciliolate. Lower glume margins ciliolate. Lower glume apex acute. Upper glume ovate, chartaceous, 1-keeled. Upper glume primary vein ciliolate. Upper glume margins ciliolate. Upper glume apex acuminate.

Florets. Fertile lemma orbicular, 10 mm long, 8 mm wide, chartaceous, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex acute. Palea 1 length of lemma, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate. Palea apex entire or dentate, 2 -fid.

Flower and Fruit. Lodicules absent. Anthers 6, 10 mm long, purple. Filaments united in a tube. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Mizoram.

Dendrocalamus semiscandens C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 8(1): 28 (1989).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Mengsuo, Ximeng, 1000 m, 27 Sept. 1985, *D. Z. Li 85242* (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 40).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or leaning, 700–1800 cm long, 60–150 mm diam., woody. Culm-internodes terete, thick-walled, 30–60 cm long, distally pubescent. Lateral branches dendroid. Branch complement many, with 1 branch dominant. Culm-sheaths present, deciduous, 16–27 cm long, coriaceous, hispid, with dark brown hairs, without auricles. Culm-sheath ligule 1 mm high, entire. Culm-sheath blade ovate, erect, 6–8 cm long, acuminate. Leaves 6–12 per branch. Leaf-sheaths pubescent. Leaf-sheath auricles absent. Ligule an eciliate membrane, 3–5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 25–35 cm long, 30–45 mm wide. Leaf-blade venation with 20–24 secondary veins. Leaf-blade surface pubescent, sparsely hairy, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1–3.2 cm long, 2.8–4.5 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–13 mm long, 4–7.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 1–3 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, 7 mm long, chartaceous, without keels, 9 -veined. Upper glume apex acute.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 8.5–9.5 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, mucronate. Palea 7.5–8 mm long, chartaceous, 2-keeled but the uppermost without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 3.7 mm long, anther tip apiculate. Filaments 7 mm long. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus sericeus Munro. *Trans. Linn. Soc.* 26: 148 (1868).

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: ST: *Thomson s.n.*, Sep 1858, India: Behar, monte Parasnath, 4000 ped. s. m. (K).

ST: *Hooker s.n.*, Feb 1848, India: Behar, monte Parasnath (K).

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

Derivation (Clifford & Bostock 2007): *L. sericus*, silken; -ea, indicating resemblance. Densely invested in part or totally with long hairs.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 700–1700 cm long, woody. Culm-internodes terete, solid. Lateral branches dendroid. Culm-sheaths present, hispid, hairy on margins. Culm-sheath blade triangular, acute. Leaf-sheaths keeled, pilose. Ligule a ciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 12–40 cm long, 17–25 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade venation with 12–14 secondary veins. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, 4–5 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 7.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume surface pubescent. Lower glume margins ciliate. Lower glume apex acute. Upper glume ovate, chartaceous, without keels. Upper glume surface pubescent. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 7.5–9 mm long, chartaceous, without keel, more than 3-veined. Lemma surface pubescent, hairy above. Lemma apex attenuate, pungent. Palea chartaceous, 5 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate. Palea surface pubescent, hairy on flanks.

Flower and Fruit. Lodicules absent. Anthers 6, yellow, anther tip apiculate or penicillate. Filaments united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent all over. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Dendrocalamus sikkimensis Gamble ex Oliver. *Hook. Icon. pl.* 18, t. 1770. (1888).

Accepted by: R.J.Soreng et al., *Catalogue of 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).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Sikkim: Prantling (K iso).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (482, Fig. 1 & 488, Fig. 2), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 36).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1700–2000 cm long, 120–200 mm diam., woody. Culm-internodes terete, thick-walled, 30–45 cm long, dark green, antrorsely scabrous. Lateral branches dendroid. Buds or branches absent from lower part of culm. Culm-sheaths present, 30 cm long, 0.9 times as long as wide, pubescent, with dark brown hairs, auriculate, setose on shoulders. Culm-sheath ligule dentate. Culm-sheath blade lanceolate, reflexed, 20–30 cm long, 50–70 mm wide. Leaf-sheaths smooth. Leaf-sheath oral hairs setose. Leaf-sheath auricles falcate. Ligule an eciliate membrane or a ciliolate membrane. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate or oblong, 15–25 cm long, 25–50 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation indistinct, with 20 secondary veins. Leaf-blade surface scabrous, rough abaxially, pilose, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 4 cm long, dense, 5 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 12–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 3–4 empty glumes, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume ovate, chartaceous, 1-keeled. Upper glume primary vein ciliate. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 8–10 mm long, chartaceous, without keel, more than 3-veined. Lemma margins ciliate. Lemma apex acute, mucronate. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate. Apical sterile florets 1 in number, barren.

Flower and Fruit. Lodicules absent. Anthers 6. Filaments united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent all over. Caryopsis with adherent pericarp, obovoid.

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

Country /Province /State. **China.** China South Central. **Indian Subcontinent.** Assam, Eastern Himalaya. **Mesoamerica, Caribbean.** Honduras.

TDWG4. Yunnan. Bhutan, Sikkim, Meghalaya.

Dendrocalamus sinicus L.C. Chia & J.L. Sun. *Bamboo Res. Asia* 1(1): 10–13 (1982).

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).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Yunnan: 600–1000 m.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 43).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, nodding at the tip, 2000–3000 cm long, 200–300 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, thick-walled, 17–22 cm long, distally mealy. Lateral branches dendroid, arising from upper culm. Branch complement many, with subequal branches. Culm-sheaths present, persistent, coriaceous, hispid, hairy above, with appressed hairs, with dark brown hairs, without auricles, glabrous on shoulders. Culm-sheath ligule 6 mm high, entire or dentate. Culm-sheath blade triangular, as wide as sheath at base, erect, pubescent, acuminate. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1.5–2 mm long, erose. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 20–40 cm long, 40–65 mm wide. Leaf-blade venation with 20–26 secondary veins, with distinct cross veins. Leaf-blade surface glabrous or puberulous, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in stellate clusters, 2–4 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 30–35 mm long, 6.5–7.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 12–15 mm long, chartaceous, without keels. Lower glume lateral veins with cross-veins. Lower glume surface puberulous. Lower glume margins ciliolate. Lower glume apex acute, mucronate. Upper glume ovate, 12–15 mm long, chartaceous, without keels. Upper glume lateral veins with cross-veins. Upper glume surface puberulous. Upper glume margins ciliolate. Upper glume apex acute, mucronate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 17–25 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliolate. Palea surface pubescent, hairy on back. Palea apex dentate, 2 -fid.

Flower and Fruit. Lodicules absent. Anthers 6, 8–12 mm long, anther tip apiculate. Filaments free or united in a tube, 1.5–3 mm long. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus sinuatus (Gamble) Holttum. *Gard. Bull Singapore*, 11: 296 (1947).

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

TYPE from Singapore. **Basionym or Replaced Name:** *Oxytenanthera sinuata* Gamble, *Ann. Bot. Gard. Calc.* 7: 71. (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Alvins 1988*, Negri Sembilan, Seremban (Singapore).

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

Derivation (Clifford & Bostock 2007): *L. sinus*, curve; *-ata*, possessing.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Culm-internodes terete, 40–50 cm long, distally pruinose. Lateral branches dendroid. Culm-sheaths present, deciduous, pubescent, with tawny hairs, auriculate, with 2–4 mm high auricles, setose on shoulders. Culm-sheath ligule 5 mm high, dentate. Culm-sheath blade lanceolate, acuminate. Leaf-sheath oral hairs scanty or lacking. Ligule an eciliate membrane, erose. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole 0.5–1 cm long, petiole glabrous or pubescent. Leaf-blades lanceolate, 20–30 cm long, 30–45 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 13 mm long, 2.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes several, 3–4 empty glumes, persistent, similar, shorter than spikelet. Upper glume surface puberulous.

Florets. Fertile lemma ovate, 11 mm long, chartaceous, without keel, more than 3-veined. Lemma surface puberulous. Lemma apex acuminate. Palea 10 mm long, chartaceous, 6–8 -veined, 2-keeled but the uppermost without keels. Palea keels ciliolate.

Flower and Fruit. Lodicules absent. Anthers 6, 5–6 mm long, anther tip apiculate. Filaments united in a tube. Stigmas 1, pubescent. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Laos. Malaya.

Dendrocalamus somdevae H.B. Naithani. *Indian Forester*, 119(6): 504 (1993).

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, Jogwala to Majri: Som Deva 10985 (DD holo).

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

Derivation (Clifford & Bostock 2007): In honor of Som Deva (fl. 1991) Indian botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 1200–2000 cm long, 60–70 mm diam., woody. Culm-internodes terete, 15–40 cm long, distally pubescent. Culm-nodes swollen. Lateral branches dendroid. Culm-sheaths present, 20–75 cm long, 2 times as long as wide, coriaceous, glabrous or hispid, with dark brown hairs, convex at apex. Culm-sheath ligule 7–12 mm high, lacerate. Culm-sheath blade triangular, 2.5–4 cm long, 15–80 mm wide, pubescent (at base), acuminate. Leaf-sheaths striately veined. Leaf-sheath oral hairs setose, deciduous. Ligule an eciliate membrane, 1 mm long, erose. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.3 cm long. Leaf-blades lanceolate, 20–30 cm long, 20–40 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 12–20 secondary veins. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1–2.5 cm long, dense, 2.5 cm between clusters, scabrid on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10 mm long, 5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the upper absent or obscure or two, persistent, similar, shorter than spikelet. Lower glume ovate, 4 mm long. Lower glume apex acute. Upper glume ovate, 4 mm long, chartaceous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma orbicular, 7–8 mm long, chartaceous, without keel, more than 3-veined. Lemma lateral veins without cross-veins or transversely connected at apex. Lemma surface glabrous. Lemma margins ciliate. Lemma apex acute, mucicous or mucronate (uppermost floret). Palea 1 length of lemma, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliate. Palea surface pilose, hairy on margins.

Flower and Fruit. Lodicules absent. Anthers 6, yellow, anther tip apiculate. Filaments united in a tube. Stigmas 1. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Rajasthan.

Dendrocalamus strictus (Roxb.) Nees. *Linnaea*, 9: 476 (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), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006).

TYPE from India. **Basionym or Replaced Name:** *Bambos stricta* Roxb., *Pl. Coromandel* 1: 58, pl. 80 (1798)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Coromandel: Roxburgh.

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (777, Pl. 1517), K.M.Matthew, *Flora Palni Hills* (1996) (811, Pl 811), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (pl.743), D.Farrelly, *The Book of Bamboo* (1984) (191), S.Dransfield, & E.A. Widjaja, *Plant Resources of South-East Asia No. 7, Bamboos* (1995), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 35).

Derivation (Clifford & Bostock 2007): L. erect. Inflorescence branches erect.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 600–1500 cm long, 25–75 mm diam., woody, without nodal roots or with prop roots. Culm-internodes terete, solid, 30–45 cm long. Culm-nodes swollen. Lateral branches dendroid. Branch complement many, with 1 branch dominant, thinner than stem. Culm-sheaths present, deciduous, 0.25–0.66 length of internode, coriaceous, hispid, hairy throughout, with dark brown hairs, auriculate, ciliate on shoulders. Culm-sheath blade lanceolate, acuminate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear or lanceolate, 2.5–25 cm long, 5–30 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface scabrous, rough adaxially, pubescent, hairy abaxially or on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.5–4 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 7.5–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acuminate. Upper glume ovate, chartaceous, without keels. Upper glume apex acuminate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 8 mm long, chartaceous, without keel, more than 3-veined. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn pungent, 2 mm long overall. Palea ovate, 0.9 length of lemma, chartaceous, 6–9 -veined, 2-keeled but the uppermost without keels. Palea keels ciliate.

Flower and Fruit. Lodicules absent. Anthers 6. Stigmas 1. Ovary umbonate, pubescent on apex. Caryopsis with adherent pericarp, ovoid or orbicular, 8 mm long, hairy at apex, apex rostrate.

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

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

Country /Province /State. Northern Africa, Western Indian ocean. Madagascar (*). **China, Eastern Asia.** China Southeast. Taiwan (+). **Indian Subcontinent, Indo-China, Malaysia.** Assam, India, Nepal, Pakistan, Sri Lanka, West Himalaya. Myanmar, Thailand. Java. New Caledonia (*). **Mesoamerica, Caribbean, Brazil.** Guatemala, Honduras, Panama. Windward Islands. Brazil Southeast. Guangdong (+).

Dendrocalamus textilis N.H. Xia, L.C. Chia & C.Y. Xia. *Acta Phytotax. Sin.*, 31(1): 63 (1993).

Regarded by K as a synonym (*D. tsiangii*).

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

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Sichuan: Qionglai, Shuikou, 19 Aug. 1979, *Nan-zhu 2612* (HT: SCBI).

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

Derivation (Clifford & Bostock 2007): *L. textilis*, intertwined. Used for weaving or thatching.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Guizhou.

Dendrocalamus tibeticus Hsueh & T.P. Yi. *J. Bamboo Res.*, 2(1): 31 (1983).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Xizang: Medog, broad-leaved forests, 17 Aug. 1977, *D.B. Yi 77185* (HT: SFS).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 37).

Derivation (Clifford & Bostock 2007): *L. -ica*, belonging to. From Tibet Autonomous Region, China.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 1500–2500 cm long, 120–180 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, 40–45 cm long, distally mealy or glabrous. Culm-nodes flush with internodes. Lateral branches dendroid. Culm-sheaths present, 33–40 cm long, 1.1–1.3 times as long as wide, coriaceous, hispid, without auricles. Culm-sheath ligule 2–4 mm high, fimbriate. Culm-sheath blade lanceolate, erect, glabrous on surface or pubescent. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1–1.5 mm long, truncate. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.4–0.6 cm long. Leaf-blades lanceolate, 10–32 cm long, 22–45 mm wide. Leaf-blade venation with 16–26 secondary veins, with obscure cross veins. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or ovate, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 7 mm long, chartaceous, 11–155 -veined. Lower glume surface pubescent.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 6–8 mm long, 4–6 mm wide, chartaceous, without keel, more than 3-veined. Palea chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliolate.

Flower and Fruit. Lodicules absent. Anthers 6, 5–6 mm long, yellow, anther tip pubescent. Stigmas 1, pubescent. Ovary pubescent on apex. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, Tibet.

TDWG4. Yunnan.

Dendrocalamus tomentosus C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 8(1): 34 (1989).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: Gongga Shan, Mangla, Canyon, broad-leaved forests, 850 m, 28 Sept. 1977, C.J. Hsueh 1198 (HT: SWFC).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 45).

Derivation (Clifford & Bostock 2007): *L. tomentum*, stuffing material of a pillow; -osa, abundance. Plant invested in part or totally with short hairs.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect or leaning, pendulous at the tip, 1500–2000 cm long, 90–120 mm diam., woody, with aerial roots from the nodes. Culm-internodes terete, 29–55 cm long, distally pubescent. Lateral branches dendroid. Branch complement many. Culm-sheaths present, deciduous, coriaceous, pubescent, without auricles. Culm-sheath ligule 5–7 mm high. Culm-sheath blade ovate, spreading or reflexed, acuminate. Leaves 5–8 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.3 cm long. Leaf-blades lanceolate, 25–34 cm long, 25–42 mm wide. Leaf-blade venation with 16–22 secondary veins. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 0.7–1.1 cm long, 1.2 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5.5 mm long, 4.5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes one the lower absent or obscure or two, persistent, similar, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, chartaceous, without keels. Upper glume apex acute.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 4–5 mm long, 4–6 mm wide, chartaceous, without keel, more than 3-veined. Lemma surface pilose. Lemma apex acuminate. Palea 4 mm long, chartaceous, 2-keeled but the uppermost without keels. Palea keels ciliolate.

Flower and Fruit. Lodicules absent. Anthers 6, 2.5–3 mm long, yellow, anther tip apiculate. Stigmas 1. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Yunnan.

Dendrocalamus tsiangii (McClure) L.C. Chia & H.L. Fung. *Acta Phytotaxonomica Sinica* 18(2): 216 (1980).

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).

TYPE from China. **Basionym or Replaced Name:** *Lingnania tsiangii* McClure, *Sunyatsenia*, 6: 41 (1941).

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, China Southeast. Guangxi. Guizhou, Sichuan.

Dendrocalamus yunnanicus C.J.Hsueh & D.Z.Li. *J. Bamboo Res.*, 7(3): 11, 17 (1988).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: Hekou, 80 m, 8 Nov. 1985, *Hsueh f. & D.Z. Li 85288* (HT: SWFC).

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

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

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, pendulous at the tip, 1800–2500 cm long, 110–180 mm diam., woody, without nodal roots or rooting from lower nodes. Culm-internodes terete, thin-walled, 42–52 cm long. Lateral branches dendroid. Branch complement many. Culm-sheaths present, deciduous, 34–38 cm long, coriaceous, hispid, with tawny hairs, without auricles, glabrous on shoulders or ciliate on shoulders. Culm-sheath ligule 5–8 mm high, dentate. Culm-sheath blade ovate, reflexed, 9–18 cm long, 30–90 mm wide, hispid, acuminate. Leaves 7–10 per branch. Leaf-sheaths pilose. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 25–35 cm long, 45–65 mm wide. Leaf-blade venation with 18–22 secondary veins. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 1.5–3.5 cm between clusters, pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–16 mm long, 5–7 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes suppressed between florets.

Glumes. Glumes two, persistent, similar, shorter than spikelet. Lower glume ovate, 2–4 mm long, chartaceous, without keels, 12 -veined. Lower glume surface pubescent. Lower glume apex acute, mucronate. Upper glume ovate, 2–4 mm long, chartaceous, without keels, 12 -veined. Upper glume surface pubescent. Upper glume apex acute, mucronate.

Florets. Fertile florets increasing in size upwards. Fertile lemma ovate, 5–9 mm long, 5–8 mm wide, chartaceous, without keel, 16–20 -veined, more than 3-veined. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 2–4 mm long overall. Palea 4–8 mm long, chartaceous, 2-keeled but the uppermost without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 3–4 mm long, yellow, anther tip apiculate. Filaments 10 mm long. Stigmas 1. Caryopsis with adherent pericarp.

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

Country /Province /State. China. China South Central. **Indo-China.** Vietnam.

TDWG4. Yunnan.

Deschampsia airiformis (Steud.) Benth. & Hook. f. *Gen. Pl.* 3: 1158 (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 Chile. **Basionym or Replaced Name:** *Trisetum airiforme* Steud. *Syn. Pl. Glumac.* 1: 229 (1854). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: *Hrb. Lechler 723*, Chile (IT: K, US-91466 (fragm.)).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (242, Fig. 155).

Derivation (Clifford & Bostock 2007): L. forma, appearance. Resembling *Aira* with respect to the inflorescence.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 3–20 cm long. Ligule an eciliate membrane, 2 mm long. Leaf-blades 0.3–1.5 cm long, 0.3–0.5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 1.5–6 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising (1–)2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1.3–1.5 mm long, pilose. Floret callus pilose. Floret callus hairs 1 mm long, 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume surface asperulous, rough at apex. Lower glume apex acute. Upper glume elliptic, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume surface asperulous, rough at apex. Upper glume apex acute.

Florets. Fertile lemma oblong, 3 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, with lobes 0.5 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 3–4.5 mm long overall, clearly exerted from spikelet, with twisted column. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.2 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

TDWG4. Chubut, Neuquén. Chiloe, Aisen, Magellanes. Santiago, La Araucania. Los Lagos.

Deschampsia angusta Stapf & C. E. Hubbard. *Journ. Bot.* 66: 40 (1928).

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

TYPE from Uganda. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *G.N. Humphreys 513*, 1926, Uganda: Mt. Ruwenzori (K).

Illustrations (Books): R.M.Phill, F.T.E.A., *Gramineae* (1(1970):93, Fig.31).

Derivation (Clifford & Bostock 2007): *L. narrow*. Narrow, with respect to leaf-blades or spicate panicles.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–75 cm long. Ligule an eciliate membrane, 10–18 mm long. Leaf-blades flat or conduplicate, 10–30 cm long, 3–5 mm wide. Leaf-blade surface ribbed, scabrous.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, effuse, 15–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, laterally compressed, 7–8 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pilose. Floret callus pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume linear or lanceolate, 6–7.5 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 7–8 mm long, 1.7–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 4–5 mm long, membranous, yellow or mid-green or purple, shiny, without keel, 4 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight, 2–5 mm long overall, not or scarcely exerted from spikelet. Palea keels scaberulous. Rhachilla extension 0.2–0.3 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5–2.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Kenya, Uganda.

Deschampsia antarctica E. Desv. *C. Gay, Fl. Chil.* 6: 338 (1853).

Accepted by: 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: T: *Eights s.n.*, South Shetland Islands.

Recent Synonyms: *Deschampsia henrardii* A.W.Kloos, *Blumea*, Suppl. 3: 24, f. (1946).

Illustrations (Books): E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (243, Fig. 76), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (234, Fig 151).

Illustrations (Journals): *Blumea* (Supp. 3: 23 (1946), as *D. henrardii*).

Derivation (Clifford & Bostock 2007): *L. anti*, opposite; *arctica*, the Arctic. With southern hemisphere distributions south of about the latitude of the Shetland Islands.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, cushion forming. Culms 10–30 cm long. Ligule an eciliate membrane, 4–8 mm long, acuminate. Leaf-blades filiform, convolute, 2.5–3 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence a panicle, not deciduous as a whole or deciduous as a whole, exerted or embraced at base by subtending leaf or enclosed. Panicle open or contracted, lanceolate or pyramidal, 5–20 cm long. Panicle branches capillary, puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1–1.3 mm long, pilose. Floret callus pilose. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 2–2.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliolate. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–3 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or scaberulous, rough above. Lemma apex dentate, 4 -fid, with outer lobes longer, with lobes 0.5 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, straight or geniculate, 3.5–5.5 mm long overall, clearly exerted from spikelet, without a column or with a straight or slightly twisted column. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.4–0.5 mm long, retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 1–1.2 mm long, dark brown. Hilum punctiform.

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

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South. **Subantarctic islands, Antarctic continent.** Crozet Is, Falkland Is (Malvinas), Heard-McDonald Is, Kerguelen, South Georgia, South Sandwich Is, Tristan de Cunha. Antarctica.

TDWG4. Mendoza. Chubut, Río Negro, Santa Cruz, Tierra del Fuego. Santiago, Biobio, La Araucania. Magellanes.

Deschampsia argentea Lowe. *Trans. Camb. Phil. Soc.* 4 reimpr. 7. (1831).

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

Basionym or Replaced Name: *Aira argentea* Lowe *Trans. Cambridge Philos. Soc.* 4: 9 (1831)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Canary Is.: Armitad 534 (K iso).

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

Derivation (Clifford & Bostock 2007): *L. silvery*. Glumes or lemmas silvery.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–85 cm long. Ligule an eciliate membrane, 5.5–13 mm long. Leaf-blades filiform, conduplicate, 0.6–1.5 mm wide, stiff.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 12–25 cm long. Primary panicle branches whorled at most nodes. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 4–5.5 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pilose. Floret callus pilose.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume ovate, 3.5–4.4 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 3.7–5.1 mm long, 1.2–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume surface smooth or asperulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.9–4.4 mm long, membranous, shiny, without keel, 4 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 3–5 mm long overall, with twisted column. Rhachilla extension 0.3–0.4 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.3–1.8 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

$2n = 26$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. Macaronesia. Madeira.

Deschampsia berteriana (Kunth) Fr. Meigen. *Bot. Jahrb.* 17: 228 (1893).

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

TYPE from Chile. **Basionym or Replaced Name:** *Trisetum berterianum* Kunth *Revis. Gramin.* 2: 457, t. 142 (1831)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Bertero* 787, 1829, Chile: Quillota (P; IST: LE-TRIN-, US (fragm. ex P), US- (fragm. ex LE-TRIN-)).

ST: *Bertero* 30, 1828, Chile: Rancagua (P; IST: US (fragm. ex P), US-601352 (fragm. ex MPU)).

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

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Carlo Guiseppe Bertero (1789–1831) Italian botanist, physician, pharmacist and traveller.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms 25–50 cm long, 2–4 -noded. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 4–7 mm long, acuminate. Leaf-blades flat or conduplicate, 5–10 cm long, 1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, nodding, 5–20 cm long. Primary panicle branches 2–3 -nate. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1.5–1.8 mm long, pilose. Floret callus pilose. Floret callus hairs 0.5–1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 5.5–6 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 5.5–6 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

Florets. Fertile lemma oblong, 4–4.5 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 7–8 mm long overall, with twisted column. Rhachilla extension glabrous.

Flower and Fruit. Lodicules 2, membranous. Anthers 1–2, 0.5 mm long, retained within floret. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central, Chile South.

TDWG4. Mendoza. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, Biobio. Aisen, Magellanes.

Deschampsia brasiliensis (Louis-Marie) Valencia. *Rev. Argent. Agron.* 8: 128 (1941).

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

Basionym or Replaced Name: *Trisetum brasiliense* Louis-Marie, *Rhodora*, 30: 242 (1929).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 35–50 cm long. Culm-internodes smooth, distally glabrous. Leaf-sheaths striately veined. Ligule an eciliate membrane, 0.5–1 mm long, bilobed. Leaf-blades filiform, involute, 25 cm long, 1–1.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle lanceolate, 5–8 cm long, 1 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent. Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume ovate, 5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 4.5 mm long, 2 mm wide, cartilaginous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 5–6 mm long overall, with twisted column. Palea 1 length of lemma. Palea keels ciliolate.

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

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Deschampsia brevifolia R. Br. *Chlor. Melvill.* 33 (1823).

Regarded by K as a synonym (*D. cespitosa*).

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

TYPE from Melville Island. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *s. n.*, (LE). Trinius scrips..

ST: *Edwards s.n.*, 1820, (BM; IST: US-3168553).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 24 Poaceae*, part 1 (2007) (630).

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 Pooideae. Tribe: Poeae.

Flower and Fruit. $2n = 52$ (2 refs TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. Subarctic America, Western Canada, Northwest USA, Southwestern USA. Aleutian Is, Alaska, Yukon, Northwest Territories, Nunavut, Greenland. British Columbia. Idaho, Montana, Wyoming. Utah.

Deschampsia cespitosa (L.) Beauv. *Agrost.* 91. t. 18. f. 3. (1812).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, 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), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Europe. **Basionym or Replaced Name:** *Aira cespitosa* L., *Sp Pl.* 1: 64–65 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. in Europae partis cultis & fertilibus..

Recent Synonyms: *Deschampsia glauca* Hartm., *Handb. Skand. Fl.* 448 (1820). *Deschampsia alpina* (L.) Roem. & Schult., *Systema Vegetabilium* 2: 686 (1817).

Deschampsia mackenzieana Raup., *J. Arnold Arbor.* 17(3): 205–206, pl. 190 (1936)

Deschampsia sukatschewii (Popl.) Roshev., *Flora URSS* 2: 246 (1934).

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (252 also as *D. alpina*), N.N.Tsvelev, *Grasses of the Soviet Union* (1983) (377 (257), Pl.4), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (103, Fig 60), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (34, Fig 16 as *Deschampsia caespitosa*), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (151, Fig 50 as ssp. *orientalis*), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (264), C-C Hsu, *Taiwan Grasses* (1975), H.J.Noltie, *The Grasses of Bhutan* (2000) (591, Fig. 23 & as ssp. *sikkimensis*), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (210, Fig 157), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (458, Fig 89), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (196), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989), A.Wilson (ed.), *Flora of Australia*,

Vol 44A. *Poaceae* (2009) (260, Fig 35), K.F.Best, et al, *Prairie Grasses* (1971) (107), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 24 Poaceae*, part 1 (2007) (627 as subspecies *cespitosa*, *beringensis* & *holciformis*), S.A.Renouze, *Gramineas de Bolivia* (1998) (167, Fig 40), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (445 & 446, Fig. 94 & 95), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (230, Fig 147), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Figs. 450/451 as *Deschampsia cespitosa* ssp. *pamirica* & *D. cespitosa* ssp. *ivanovae* & *D. cespitosa* ssp. *cespitosa* & *D. cespitosa* ssp. *orientalis*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:57(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, R.Darke, *Ornamental Grasses* (2004);, R.Darke, *The Encyclopaedia of Grasses for Liveable Landscapes* (2007);.

Derivation (Clifford & Bostock 2007): *L. caespes*, grass that has been cut; -osa, abundance. Habit tufted.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 20–200 cm long, 1–3-noded. Leaves mostly basal. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 10–15 mm long, acute. Leaf-blades flat or involute, 10–60 cm long, 2–5 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 10–50 cm long, 3–20 cm wide. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–6 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets or reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 4–6 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 4–6 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4.5 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex erose or dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0–0.25(–0.5) way up back of lemma, straight, 3–5 mm long overall, not or scarcely exerted from spikelet. Palea keels scaberulous. Rhachilla extension 0.5 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5–2 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

$N = 13$ (1 ref TROPICOS). $2n = 24$ (1 ref TROPICOS), or 26 (2 refs TROPICOS).

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

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

Country /Province /State. : Denmark, Great Britain. Belarus, Estonia, Latvia, Lithuania, Central European Russia, East European Russia, North European Russia, South European Russia, Northwest European Russia. **Northern Africa, Macaronesia, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, Southern Africa** (*). Morocco. Congo, Annobon, Principe & Sao Tome, Bioko, Rwanda, DRC. Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Kwazulu-Natal, Lesotho, Eastern Cape. Siberia, Russian far east, **Middle Asia, Caucasus, Western Asia, China, Mongolia, Eastern Asia, Russia.** Altay, Buryatiya, Chita, Irkutsk, Krasnoyarsk, Tuva. Kamchatka, Kuril Is, Magadan, Primorye, Sakhalin. Kazakhstan, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan. North Caucasus, Transcaucasus. Iran. China South Central, Inner Mongolia, Manchuria, China North-Central, Qinghai, Tibet, Xinjiang. Mongolia. Japan, Korea, Taiwan. Japan Hokkaido, or Honshu, or Kyushu. **Indian Subcontinent.** Eastern Himalaya, Pakistan, West Himalaya. **Australia, New Zealand.** South Australia, New South Wales, A.C.T., Victoria, Tasmania. Chatham Is, New Zealand North I, New Zealand South I, Stewart Is, Auckland Is, Macquarie Is. **North-central Pacific.** Hawaii. **Subarctic America, Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Aleutian Is, Alaska, Greenland, Northwest Territories, Yukon. Alberta, British Columbia, Manitoba, Saskatchewan. Labrador, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward I, Quebec. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Minnesota, North 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. Virginia. **Western South America, Brazil, Southern South America.** Bolivia. Brazil South. Argentina Northwest, Argentina South, Chile Central, Chile South. Macquarie Is, South Georgia.

TDWG4. Gansu, Shaanxi. Sichuan, Yunnan. Bhutan, Sikkim. Uttah Pradesh. Himachal Pradesh, Jammu Kashmir. Southern. Tablelands, Western Slopes. Mendoza, San Juan. Chubut, Neuquén, Río Negro, Santa Cruz, Tierra del Fuego. Coquimbo, Santiago, Maule, Biobio, La Araucania. Aisen.

Deschampsia chapmanii Petrie. *Trans. N. Z. Inst.* 23: 1890 :401 (1891).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *F.R. Chapman s.n.*, Jan 1890, New Zealand: Auckland Islands (WELT-69437). LT designated by Edgar & Connor, *Fl. New Zealand* 5: 309 (2000).

Recent Synonyms: *Deschampsia novae-zelandiae* Petrie, *Trans. & Proc. New Zealand Inst.* 23: 402 (1891).

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

Derivation (Clifford & Bostock 2007): in honor of Frederick Revans Chapman (1849–1936) New Zealand judge and naturalist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–45 cm long. Ligule an eciliate membrane. Leaf-blades filiform, flat or involute, 4–10 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, ovate, 7–15 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, glabrous. Floret callus glabrous.

Glumes. Glumes persistent, similar, reaching apex of florets, shiny. Lower glume lanceolate, 1.5 mm long, 0.6–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 2–2.5 mm long, 1.3–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 1.5 mm long, membranous, shiny, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex dentate, 3–5 -fid, truncate, mucronate, 1 -awned. Principal lemma awn dorsal, arising 0.8–0.9 way up back of lemma, 0.2–0.5 mm long overall. Palea keels smooth. Rhachilla extension glabrous.

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

Distribution (TDWG). Continent. Australasia, Antarctica.

Country /Province /State. **New Zealand.** New Zealand North I, New Zealand South I, Stewart Is, Campbell Is, Auckland Is, Macquarie Is. **Subantarctic islands.** Macquarie Is.

Deschampsia christophersenii C.E.Hubb. *Bull. Brit. Mus. (Nat. Hist.), Bot.*, 8(4): 388 (1981).

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: Tristan da Cunha Island,.

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

Derivation (Clifford & Bostock 2007): In honor of Erling Christophersen (1898–1994) Norwegian botanist, geographer and diplomat.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths coriaceous, persistent and investing base of culm. Basal innovations intravaginal. Culms erect, 15–40 cm long, 2 -noded. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, smooth, glabrous on surface. Ligule an eciliate membrane, 2–5 mm long, acute. Leaf-blades erect, filiform, involute or convolute, 5–20 cm long, 2–2.5 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, smooth, glabrous. Leaf-blade apex abruptly acute or acute, mucicous or pungent, hardened.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate or oblong, 7–15 cm long, 1–2 cm wide. Primary panicle branches appressed or ascending, 3–6 cm long. Panicle axis hispidulous. Panicle branches glabrous or hispidulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–4 mm long, smooth or scaberulous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 7.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite. Floret callus bearded. Floret callus hairs 2–2.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny, gaping. Lower glume lanceolate or elliptic, 7.5–10 mm long, chartaceous, much thinner on margins, 1-keeled, 1–3 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume elliptic, 7.5–9 mm long, chartaceous, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins all falling short of apex. Upper glume apex acute.

Florets. Fertile lemma oblong or ovate, 4.5–6 mm long, membranous, shiny, without keel, 5–7 -veined, more than 3-veined. Lemma surface smooth or asperulous, rough above. Lemma apex dentate, 2 -fid, with lateral lobes bidentate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 6–8 mm long overall, with a straight or slightly twisted column. Palea oblong, 1 length of lemma, 2 -veined. Palea keels ciliolate. Palea apex dentate, 2 -fid. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Antarctica.

Country /Province /State. Subantarctic islands. Tristan de Cunha.

Deschampsia cordillerarum Houman. *An. Soc. Ci. Argent* 1, 6: 231 (1918).

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

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Mendoza: Pennington 22 (BA holo).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–60 cm long, 1–2 -noded. Leaves mostly basal. Leaf-sheaths 3–4 cm long, smooth, glabrous on surface. Ligule an eciliate membrane, 10–15 mm long, bilobed. Leaf-blades conduplicate, 4–8 cm long, 1.5 mm wide. Leaf-blade surface smooth or scaberulous, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 10 cm long. Primary panicle branches 1–2 -nate, 5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, 1–1.4 mm long, pilose. Floret callus pilose. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 4 mm long, 1 length of upper glume, membranous, dark brown, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 4 mm long, 1.3 length of adjacent fertile lemma, membranous, dark brown, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–3.5 mm long, membranous, much thinner above, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 5–6 mm long overall, clearly exserted from spikelet, with a straight or slightly twisted column. Palea 1 length of lemma. Rhachilla extension 1–1.4 mm long, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 2.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central.

TDWG4. Mendoza. Coquimbo, Valparaiso, Santiago.

Deschampsia danthonioides (Trin.) Benth. *Pl. Hartw.* 342 (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).

Basionym or Replaced Name: *Aira danthonioides* Trin. *Mem. Acad. Imp. Sci. St.-Petersbourg, Ser. 6, Sci. Math.* 1(1): 57 (1830)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: V. sp. ex. Am. bor. occid.,.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (632).

Derivation (Clifford & Bostock 2007): Gk. - oides, resembling. Resembling Danthonia with respect to spikelets.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms erect, 15–60 cm long. Ligule an eciliate membrane. Leaf-blades 1–1.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 5–12 cm long, with spikelets clustered towards branch tips. Primary panicle branches 2-nate. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 4.5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pilose. Floret callus hairs 0.25 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 4.5–8 mm long, 1 length of upper glume, membranous, 1-keeled, 3-veined. Lower glume primary vein scaberulous. Lower glume apex acuminate. Upper glume elliptic, 4.5–8 mm long, 2.2–2.7 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2–3 mm long, cartilaginous, shiny, without keel, 5-veined, more than 3-veined. Lemma apex dentate, 4-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 4–7 mm long overall, with twisted column.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Subarctic America, Western Canada, Northwest USA, Southwestern USA, South-central USA, Mexico.** Yukon. British Columbia. Idaho, Montana, Oregon, Washington, Wyoming. Arizona, California, Nevada, Utah. New Mexico. Northeast Mexico, Northwest Mexico.

Chihuahua. Baja California.

Deschampsia domingensis Hitchcock & Ekman. *U. S. Dept. Agric., Misc. Publ. No. 243* : 67 (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 Dominica. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman H13633b*, 2 Oct 1929, Dominican Republic: Hispaniola I.: Azua Prov. (US-1502064). K has 2 sheets of 13633, without "b".

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (67, Fig. 37).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect, 60–90 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 8 mm long, acuminate. Leaf-blades erect, flexuous, conduplicate or involute, 1–2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or ovate, 10–20 cm long. Primary panicle branches spreading, 5–10 cm long. Panicle branches capillary, flexuous, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pubescent or pilose. Floret callus hairs 0.5–2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 5–6 mm long, 1 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 5–6 mm long, 1.5–2 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–4 mm long, membranous, shiny, without keel, 5-veined, more than 3-veined. Lemma apex dentate, 4-fid, with lobes 0.5 mm long, truncate, awned, 1-awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 6–7 mm long overall, with twisted column. Palea 1 length of lemma.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Dominican Republic.

Deschampsia elongata (Hook.) Munro. *Benth. Pl. Hartw.* 342. (1857).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Aira elongata* Hook. *Fl. Bor.-Amer.* 2: 243, pl. 228 (1840)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *D. Douglas s.n.*, no date, USA: Oregon (US-76303 (fragm.)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (242, Fig. 154).

Derivation (Clifford & Bostock 2007): L. elongated. Inflorescence elongated.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 25–80 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3–9 mm long, pubescent on abaxial surface, acute or acuminate. Leaf-blades filiform, conduplicate or involute, 2–4 cm long, 0.5–1.5 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear, 5–30 cm long. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pilose. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 3–5.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume elliptic, 3–5.5 mm long, 1.2–2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2.5 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or scaberulous. Lemma apex erose, obtuse, awned, 1 -awned. Principal lemma awn dorsal, arising 0.4–0.5 way up back of lemma, straight, 3–4 mm long overall. Palea 1 length of lemma.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. Subarctic America, Western Canada, Northwest USA, Southwestern USA, Mexico. Yukon. British Columbia. Idaho, Montana, Oregon, Washington, Wyoming. Arizona, California, Nevada, Utah. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico. **Southern South America.** Argentina South, Chile Central, Chile South.

TDWG4. Chubut, Neuquén, Tierra del Fuego. Coquimbo, Santiago, La Araucania. Aisen, Magallanes. Distrito Federal, Mexico State, Morelos. Hidalgo. Veracruz. Jalisco, Michoacan.

Deschampsia foliosa Hack. *Cat. Gram. Portugal.* 33. (1880).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, T.G.Tutin et al, *Flora Europaea* 5 (1980).

TYPE from Azores. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *B.S.T. Carreiro* 378, 1879, Azores: Lagoa de Fogo insulae S. Michaelis (W; IT: US-865606 (fragm. ex W)).

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

Derivation (Clifford & Bostock 2007): L. folium, leaf; -osa, abundance.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 15–30 cm long. Culm-internodes elliptical in section, smooth. Leaves distichous. Ligule an eciliate membrane, 4–7 mm long, acute. Leaf-blades filiform, conduplicate, 5–15 cm long, 0.6–1 mm wide, mid-green. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins smooth. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, loose, 4–9 cm long, 1–5 cm wide. Primary panicle branches ascending. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3.5–6 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pubescent. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, yellow or purple, 1-keeled, 1 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.5 length of adjacent fertile lemma, membranous, yellow or purple, 1-keeled, 3 -veined. Upper glume lateral veins prominent. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–4 mm long, membranous, shiny, without keel, 4 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, straight or geniculate, 3–7 mm long overall, without a column or with twisted column. Rhachilla extension 0.5 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. Macaronesia. Azores. Western Asia. Iran.

Deschampsia gracillima T. Kirk. *Journ. Bot.* 24: 237 (1891).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *T. Kirk s.n.*, 12 Jan 1890, New Zealand: above Carnley Harbour, Lord Auckland's Group (WELT-69440). LT designated by Edgar & Connor, *Fl. New Zealand* 5: 312 (2000).

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. very delicate. Of slender habit.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 5–20 cm long. Leaves mostly basal. Ligule an eciliate membrane. Leaf-blades filiform, convolute, 1–4 cm long, 0.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate or pyramidal, 3–5 cm long. Panicle branches capillary, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 0.75 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume elliptic, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, mucicous or mucronate. Principal lemma awn (mucro) subapical. Palea keels ciliolate. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand. Tasmania. New Zealand South I, Stewart Is, Campbell Is, Auckland Is.

Deschampsia kingii (Hook.f.) E. Desv. C. Gay, *Fl. Chil.* 6: 335 (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. **Basionym or Replaced Name:** *Aira kingii* Hook. f. *Fl. Antarct.* 2: 376, t. 135 (1846). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Captain King s.n.*, Hab. Strait of Magahaens (K). see notes by Parodi, 1940, p. 440 & 442, possible earlier lectotypifications.

LT: *C. Darwin [546]*, Jan or Feb 1833, South part of Tierra del Fuego (K; ILT: CGE). LT designated by D. M. Porter, *Bot. J. Linn. Soc.* 93: 31. 1986. (this plant ill. in Hooker's pl. CXXXV).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (230, Fig. 148).

Derivation (Clifford & Bostock 2007): in honor of Philip Parker King (1791–1856) British naval officer, born on Norfolk Island, died Sydney, Australia.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent or short. Culms robust, 60–140 cm long, 2–3-noded. Ligule an eciliate membrane, 10 mm long, acuminate. Leaf-blades flat or conduplicate, 10–18 cm long, 2–5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex mucous or pungent.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, nodding, 15–35 cm long. Primary panicle branches whorled at lower nodes. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2(–3) fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1.5–1.8 mm long, pilose. Floret callus pilose. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 5–6 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex erose, truncate. Upper glume elliptic, 5.5–6.5 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex erose, truncate.

Florets. Fertile lemma oblong, 3.5–4 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 1–3 mm long overall. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, 0.7–0.9 mm long, membranous. Anthers 3, 1.5–2 mm long. Ovary glabrous. Caryopsis with adherent pericarp, 2.5 mm long. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

TDWG4. Santa Cruz, Tierra del Fuego. Chiloe, Aisen, Magellanes. La Araucania. Los Lagos, Magellanes.

Deschampsia klossii Ridley. *Kew Bull.* 1913, 268 (1913).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Indonesia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: *C. Boden Kloss s.n.*, Feb 1913, Indonesia: New Guinea: Irian Jaya: Carstensz Mt., [3201 m] (IT: L, K).

Illustrations (Books): E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (61, Pl. 20).

Derivation (Clifford & Bostock 2007): in honor of Cecil Boden Kloss (1877–1949) Dutch botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 50–120 cm long. Lateral branches lacking. Ligule an eciliate membrane, 3–10 mm long. Leaf-blades flat or involute, 10–30 cm long, 1–4 mm wide, stiff. Leaf-blade surface ribbed, scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 15–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose, hairy below, with 1 mm long hairs. Floret callus pilose. Floret callus hairs 1.5–2.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny, gaping. Lower glume lanceolate, 4–5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 4–5 mm long, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 3–4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface asperulous. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.5 way up back of lemma, straight, 2.5–5 mm long overall. Rhachilla extension 1.5–2 mm long, pubescent.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.4 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. Malesia, Papuasia. Lesser Sunda Is, Moluccas. New Guinea West Papua (Irian Jaya). New Guinea. **South-central Pacific.** Society Is.

Deschampsia koelerioides Regel. *Bull. Soc. Nat. Mosc.* 41, 2: 299 (1869).

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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Russia, Kok-djar: Semenov (LE holo).

Illustrations (Books): T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Fig. 450).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Koeleria* especially with respect to the inflorescence.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 10–40 cm long. Leaves mostly basal. Ligule an eciliate membrane, 4–8 mm long, scarious. Leaf-blades 2–20 cm long, 2–3 mm wide. Leaf-blade surface ribbed, scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, oblong or ovate, 2–5 cm long, 1–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pilose. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets or reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume oblong, 3–3.6 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex entire or erose, obtuse or acute. Upper glume elliptic, 3.6–4.2 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex entire or erose, obtuse or acute.

Florets. Fertile lemma elliptic or oblong, 3.3–4.3 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.3 way up back of lemma, straight, 2.5–4 mm long overall, clearly exerted from spikelet.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. Siberia, **Middle Asia, Western Asia, China, Mongolia.** Altay, Irkutsk. Kazakhstan, Kirgizistan, Turkmenistan, Tadjikistan, Uzbekistan. Afghanistan, Iran. Inner Mongolia, China North-Central, Qinghai, Tibet, Xinjiang. Mongolia. **Indian Subcontinent.** Pakistan, West Himalaya.

TDWG4. Gansu. Nei Mongol. Jammu Kashmir.

Deschampsia laxa Phil. *Linnaea*, 29: 91 (1858).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *Fonk s.n.*, Chile: litoral de Chonos, Guaytecas, etc (SG0-PHIL-199 ; IT: SGO-45871, US-556490 (fragm. ex SGO-PHIL-199 & photo)).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (230, Fig 149).

Derivation (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms 50–100 cm long. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane, 3–7 mm long, lacerate. Leaf-blades conduplicate, 6–10 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, nodding, 15–20 cm long. Primary panicle branches 5–15 cm long. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1.5–2 mm long, pilose. Floret callus pilose. Floret callus hairs 1–2 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume linear, 6–9 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume

lateral veins absent. Lower glume apex acute. Upper glume linear, 6–9 mm long, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 4–5 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, straight, 4–6 mm long overall. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2.5 mm long, dark brown. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile South.

TDWG4. Chubut. Chiloe, Aisen, Magallanes. Los Lagos, Aisen, Magallanes.

Deschampsia liebmanna (Fourn.) Hitchcock. *Contrib US. Nat. Herb.* 17: 323 (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. **Basionym or Replaced Name:** *Deyeuxia liebmanna* E. Fourn. *Bull. Soc. Bot. France* 24: 181 (1877)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *F.M. Liebmann 610*, Sep 1841, Mexico: Veracruz: in monte Orizabensi, 14000–15300 ft (P; IT: US-726970). LT designated by ?, cited by McVaugh, *Fl. Novo-Galiciana* 14: 396 (1983).

Recent Synonyms: *Deschampsia straminea* Hitchcock, *Contrib. U.S. Nat. Herb.* 17: 323 (1913).

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

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Frederik Michael Leibmann (1813–56), Danish botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–60 cm long, wiry. Leaves mostly basal. Ligule an eciliate membrane, 5–10 mm long. Leaf-blades filiform or linear, 5–10 cm long, 1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate or pyramidal, 10–20 cm long. Primary panicle branches 2–3 -nate. Panicle branches capillary, flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose, with 2 mm long hairs.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 5–7 mm long, 1.5–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein smooth or scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight, 2–6 mm long overall. Palea 3–4 mm long, hyaline. Palea keels ciliolate. Palea apex dentate, 2 -fid.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.2 mm long. Ovary glabrous. Caryopsis with adherent pericarp, oblong, 1.5 mm long. Hilum punctiform. Endosperm farinose.

Distribution (TDWG). Continent. North America.

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

TDWG4. Distrito Federal, Mexico State, Puebla. Veracruz. Jalisco, Michoacan.

Deschampsia ligulata (Stapf) Henrard. *Blumea*, 1: 309 (1935).

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

TYPE from Indonesia. **Basionym or Replaced Name:** *Deschampsia flexuosa* var. *ligulata* Stapf, *Trans. Linn. Soc. Bot.* 2,4:248 (1894). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Borneo, Mt. Kinabalu: Haviland 1400 (K iso).

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

Derivation (Clifford & Bostock 2007): L. ligula, small tongue; -ata, possessing.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 10–40 cm long. Lateral branches lacking. Ligule an eciliate membrane, 3–5 mm long. Leaf-blades filiform, involute, 5–15 cm long, 1–1.5 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, 6–10 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose, hairy above, with 0.7 mm long hairs. Floret callus pilose. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture. Lower glume lanceolate, 5–6 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 6–7 mm long, membranous, 1-keeled, 1-veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma elliptic, 6–7 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma apex dentate, 4-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, straight or geniculate, 6–7 mm long overall, without a column or with a straight or slightly twisted column. Rhachilla extension 0.5 mm long.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Deschampsia looseriana L. Parodi. *Darwiniana*, 8: 460 (1949).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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>: *vide* TROPICOS and Kew Synonymy Database: Chile: Santiago: Bатуco: 500m: 17 Oct 1936, *Looser 3439*.

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

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection In honor of G. Looser (fl. 1931) who collected in Chile.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms 15–30 cm long, 2–3-noded. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, 3–6 mm long, acuminate. Leaf-blades flat or conduplicate, 5–10 cm long, 0.5–1 mm wide, flaccid. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, equilateral or nodding, 4–8 cm long, 1–2 cm wide. Primary panicle branches ascending, 2–3-nate, 1–4 cm long, bearing spikelets almost to the base. Panicle branches glabrous or puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 2 mm long, pilose, with 1.5 mm long hairs. Floret callus pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 6–7 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 3-veined. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume lanceolate, 6–7 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3-veined. Upper glume primary vein scabrous. Upper glume apex acute.

Florets. Fertile lemma oblong, 5 mm long, membranous, shiny, without keel, 5-veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex dentate, 2-fid, with simple equal lobes or with lateral lobes bidentate, awned, 3-awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 7–8 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 0.6–1 mm long. Palea 2-veined. Palea keels puberulous. Palea apex dentate, 3-fid. Rhachilla extension 1.5 mm long.

Flower and Fruit. Lodicules 2, membranous. Anthers 1(–2), 0.2–0.4 mm long, retained within floret. Ovary glabrous. Caryopsis with adherent pericarp, oblong, 2 mm long, dark brown. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central.

Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania.

Deschampsia maderensis (Hackel & Bornm.) Buschm. *Phyton*, 2: 276 (1950).

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

TYPE from Canary Islands. **Basionym or Replaced Name:** *Deschampsia foliosa* var. *maderensis* Hack. & Bornm. *Bot. Jahrb. Syst.* 33: 401 (1903)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Bornmueller 1342*, no date, Canary Islands / Madiera: (W; IT: US-865605 (fragm. ex W)).

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

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–30 cm long. Ligule an eciliate membrane. Leaf-blades filiform, conduplicate, 0.35 mm wide, stiff.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 5–6.5 cm long. Primary panicle branches ascending, not whorled. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 6–7.8 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pilose. Floret callus pilose.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume ovate, 3.3–7.3 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 5.8–7.5 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume surface smooth or asperulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 5.4–6.3 mm long, membranous, shiny, without keel, 4 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 4–6 mm long overall, with twisted column. Rhachilla extension 0.3–0.4 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 2.6–3.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Macaronesia. Madeira.

Deschampsia media (Gouan) Roem. & Schult. *Syst.* 2: 687 (1817).

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), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from France. **Basionym or Replaced Name:** *Aira media* Gouan, *Illustr.* 3 (1773). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: France, Montpellier: Coll?.

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

Derivation (Clifford & Bostock 2007): L. middle. Characters midway between two or more other species.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 8–70 cm long. Culm-internodes smooth. Ligule an eciliate membrane, 5 mm long, acute. Leaf-blades filiform, involute, 2–20 cm long, 1 mm wide, glaucous. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, loose, 3–24 cm long, 2–15 cm wide. Primary panicle branches spreading. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pubescent. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1–1.1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, shiny, without keel, 4 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 1.5–3 mm long overall. Rhachilla extension 0.5–0.75 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

$2n = 26$ (2 refs TROPICOS), or 28 (1 ref TROPICOS).

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

Region. Middle Europe, Southwestern Europe, Southeastern Europe.

Country /Province /State. : Germany. : France, Portugal, Spain. : Italy, Yugoslavia. **Caucasus.** Transcaucasus.

TDWG4.

Deschampsia mejlandii C.E.Hubb. *Bull. Brit. Mus. (Nat. Hist.), Bot.*, 8(4): 389 (1981).

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: HT: *E. Christophersen & Y. Mejland 1106*, 12 Jan 1938, Tristan da Cunha: near soggy plain in tree fern country, 800 m (K).

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

Derivation (Clifford & Bostock 2007): In honor of Yngvar Mejland (fl.1937–1938) Norwegian botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths coriaceous, persistent and investing base of culm. Culms erect, 12–48 cm long, 2-noded. Culm-internodes smooth, distally glabrous. Lateral branches lacking. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 7–15 mm long, lacerate. Leaf-blades erect, flat or convolute, 5–22 cm long, 2.5–6 mm wide, stiff, dark green or glaucous. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially. Leaf-blade margins scaberulous. Leaf-blade apex abruptly acute or acute, hardened.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, dense, equilateral or nodding, 10–25 cm long, 2–3.5 cm wide, contracted about primary branches. Primary panicle branches 4–8 cm long, bearing spikelets almost to the base. Panicle axis hispidulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite. Floret callus bearded. Floret callus hairs 2–3.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny, gaping. Lower glume lanceolate or elliptic, 6.5–8.5 mm long, membranous, 1-keeled, 3-veined. Lower glume primary vein scabrous. Lower glume lateral veins all falling short of apex. Lower glume apex acuminate. Upper glume lanceolate, 8–10 mm long, membranous, 1-keeled, 3-veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong or ovate, 4–5 mm long, membranous, shiny, without keel, 5–7-veined, more than 3-veined. Lemma surface asperulous. Lemma apex dentate, 2-fid, with lateral lobes bidentate, awned, 1-awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight, 6–6.5 mm long overall. Palea oblong, 3–4 mm long, 2-veined. Palea keels ciliolate. Palea apex dentate, 2-fid. Rhachilla extension pilose, with 1.5 mm long hairs.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Antarctica.

Country /Province /State. Subantarctic islands. Tristan de Cunha.

Deschampsia mendocina L. Parodi. *Darwiniana*, 8: 447 (1949).

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

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: Prov. Mendoza: Sierra de la Media Luna: en valle: 1700 m: 15 Nov 1922, *Rigal (hb. Parodi 4685)*.

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

Derivation (Clifford & Bostock 2007): from Mendoza Province, Argentine.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short. Culms erect, 20–25 cm long. Leaves mostly basal. Leaf-sheaths striately veined, smooth, glabrous on surface. Ligule an eciliate membrane, 4–6 mm long, acute. Leaf-blades curved, filiform, conduplicate, 6–8 cm long, 0.5–1 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 5–7 cm long, 1–1.5 cm wide. Primary panicle branches appressed, 2–3 cm long, bearing spikelets almost to the base. Panicle branches glabrous or puberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous, glabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 3.8–4 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, 1 mm long, villous, with 1.5 mm long hairs. Floret callus bearded. Floret callus hairs 1.5 mm long, 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 3.6–3.8 mm long, 0.9 length of upper glume, membranous, much thinner on margins, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.8–4 mm long, 1.5 length of adjacent fertile lemma, membranous, with scarious margins, purple, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5 mm long, membranous, much thinner above, dark brown, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with simple equal lobes, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight, 3 mm long overall. Palea 1 length of lemma. Rhachilla extension 1 mm long, pubescent.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.8–1 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

TDWG4. Mendoza.

Deschampsia micrantha Phil. *Anales Univ. Chile* 94: 24 (1896).

More checking of status required.

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 Chile. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile: habitat in Andibus Prov. Coquimbo l. d. Entrada de Tilito, 1883, *F. Philippi s.n.*.

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

Derivation (Clifford & Bostock 2007): Gk. mikros, small; anthos, flower. Spikelets small.

Classification. Subfamily Pooideae. Tribe: Poeae.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile Central.

Coquimbo.

Deschampsia mildbraedii Pilger. *Notizbl. Bot. Gart. Berlin*, 10: 769 (1929).

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

TYPE from Cameroun. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mildbread 10910*, Cameroon (B).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (185, Fig. 107), F.N.Hepper, *F.W.T.A.* 3(2) (1972) (373, Fig.424).

Derivation (Clifford & Bostock 2007): in honor of Gottfried Wilhelm Johannes Mildbraed (1879–1954) German botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 35–120 cm long, 1–2 -noded. Ligule an eciliate membrane, 6–12 mm long. Leaf-blades aciculate, involute, 25–45 cm long, 1–2 mm wide, stiff. Leaf-blade surface scaberulous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Peduncle scaberulous above. Panicle open, oblong or ovate, dense or loose or effuse, 10–30 cm long. Primary panicle branches 5–12 cm long. Panicle branches capillary, flexuous, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–5 mm long.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5.5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume oblong, 5–7 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 5.5–8 mm long, 1.3–1.6 length of

adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 4–5 mm long, membranous, yellow or mid-green or purple, shiny, without keel, 4 -veined, more than 3-veined. Lemma surface asperulous. Lemma apex entire or dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 4–8 mm long overall, with a straight or slightly twisted column. Palea keels scaberulous. Rhachilla extension 0.2–0.3 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 2.5–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

$2n = 52$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. Cameroon.

Deschampsia minor W.D. Clayton, non *D. caespitosa* (L.) P. Beauv. *Kew Bull.*, 40(4): 727 (1985).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, U. Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Holcus caespitosus*), T.G. Tutin et al, *Flora Europaea* 5 (1980) (as *Holcus caespitosus*).

TYPE from Spain. **Basionym or Replaced Name:** *Holcus caespitosus* Boiss., *Biblioth. Universelle Geneve* ser.2, 13: 410 (1838)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P.E. Boissier 184*, Aug 1837, Spain: Almeria / Granada (G; IT: US-81931, US-153069).

Recent Synonyms: *Holcus caespitosus* Boiss., *Bibl. Univ. Geneve, n. s.*, 13: 410 (1838).

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

Derivation (Clifford & Bostock 2007): L. smaller, lesser. Plants small in comparison with related species.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 8–25 cm long. Ligule an eciliate membrane. Leaf-blades 1–4 cm long, 1–1.5 mm wide, glaucous. Leaf-blade surface pubescent.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong or ovate, interrupted, 1.5–2 cm long, 0.7–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny. Lower glume ovate, 3.5–4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute, mucronate. Upper glume ovate, 3.5–4 mm long, 1.6 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface asperulous. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 2.2–2.5 mm long, cartilaginous, shiny, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.6 way up back of lemma, straight, 2–2.5 mm long overall. Palea keels scaberulous. Rhachilla extension 0.2 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.8 mm long. Ovary glabrous. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Europe.

Region. Southwestern Europe.

Country /Province /State. : Spain.

Deschampsia monandra L. Parodi. *Rev. Argent. Agron.* 20: 12 (1953).

Regarded by K as a synonym (*D. patula*).

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 Chile. **Basionym or Replaced Name:** *Monandraira glauca* E. Desv., *Fl. Chil.* 6: 342, t. 79, f. 1 (1854); *Deschampsia glauca* (E. Desv.) Parodi, *Darwiniana* 8: 467 (1949)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *M. Gay [131]*, Chile: in montosis odessa (P-DESV-70; IT: P, US (fragm. ex P-DESV-70)).

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

Derivation (Clifford & Bostock 2007): Gk. monos, one; aner, man.

Classification. Subfamily Pooideae. Tribe: Poeae.
Distribution (TDWG). Continent. South America.
Country /Province /State. Southern South America. Chile Central.
Coquimbo, Santiago, O'Higgins.

Deschampsia nubigena Hillebr. *Fl. Haw. Isl.* 521 (1888).

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: Maui: top of Mt. Eeka, *Forbes* 368.

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1523, Pl. 224).

Derivation (Clifford & Bostock 2007): *L. nubes*, cloud; gigno, bear. Growing on high mountains.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 30–100 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades conduplicate or involute, 5–10 cm long, 1–3 mm wide, herbaceous or coriaceous, stiff. Leaf-blade surface smooth or scabrous.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, oblong or ovate, 5–30 cm long. Primary panicle branches naked below or bearing spikelets almost to the base. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pilose. Floret callus pilose. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 5 mm long, 1 length of upper glume, membranous, much thinner on margins, light brown, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 5 mm long, 1.2 length of adjacent fertile lemma, membranous, with hyaline margins, light brown, 1-keeled. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 4 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight, 1–5 mm long overall, not or scarcely exerted from spikelet. Palea keels scaberulous. Rhachilla extension 2 mm long, pubescent.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 2 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Society Is. Caroline Is. Hawaii.

Deschampsia parvula (Hook.f.) E. Desv. *C. Gay, Fl. Chil.* 6: 339 (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. **Basionym or Replaced Name:** *Aira parvula* Hook. f., *Fl. Antarct.* 2: 377 (1846). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Hooker s.n.*, 20 Sep-7 Nov 1842, Chile: Fuegia: Isla Hermite, "rocks near mountain tops" (K).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (234, Fig 152).

Derivation (Clifford & Bostock 2007): *L. parvus*, small; -ula, diminutive. Dwarf in habit.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 5–15 cm long. Ligule an eciliate membrane, 4–10 mm long, acute. Leaf-blades filiform, convolute, 3–6 cm long, 0.5 mm wide.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle glomerate, oblong, 1.5–6 cm long, 1–1.5 cm wide. Primary panicle branches appressed. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2(–3) fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1.5–1.7 mm long, pilose. Floret callus pilose. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–4 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 4–6 mm long overall, clearly exerted from spikelet, with twisted column. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, 0.5–0.8 mm long, membranous. Anthers 3, 0.7–1 mm long. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. Southern South America. Argentina South, Chile South. **Subantarctic islands.** Falkland Is (Malvinas).

TDWG4. Santa Cruz, Tierra del Fuego. Chiloe, Aisen, Magallanes. Aisen, Magallanes.

Deschampsia patula (Phil.) Pilg. ex Skotts. *Kongl. Svenska Vetenskapsakad. Handl.* 56: 175 (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 Chile. **Basionym or Replaced Name:** *Monandriaria patula* Phil., *Anales Univ. Chile* 43: 565 (1873). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Chile: Estrecho de Magallanes, Punta Arenas (SGO-PHIL-244; IT: SGO-37214, US-867651 (fragm. ex SGO ex hb P bolgar)).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (*Fl. Pat.* 3: 234, Fig. 153 (1978)).

Derivation (Clifford & Bostock 2007): L. outspread. Inflorescence an open panicle.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 5–30 cm long. Ligule an eiliate membrane, 5–7 mm long, acute. Leaf-blades filiform, convolute, 1–2 mm wide. Leaf-blade surface smooth or scaberulous, rough abaxially.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, ovate, 5–12 cm long. Primary panicle branches 2–7 cm long. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, pubescent.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1.2 mm long, pilose. Floret callus pilose. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 2–3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with simple equal lobes, with lobes 0.2–0.3 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, straight, 1.5–3 mm long overall, not or scarcely exerted from spikelet. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.5–0.8 mm long. Ovary glabrous. Caryopsis with adherent pericarp, 1 mm long. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

TDWG4. Chubut, Santa Cruz, Tierra del Fuego. Chiloe, Aisen, Magallanes. Santiago. Magallanes.

Deschampsia pusilla Petrie. *Trans. N. Z. Inst.* 23: 403 (1891).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *D. Petrie s.n.*, Feb 1890, New Zealand: South Island: Hector Mountains, 6000 ft (WELT-69433; IT: K, US-1127172 (fragm. ex W)). LT designated by Edgar & Connor, *Fl. New Zealand* 5: 313 (2000).

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

Derivation (Clifford & Bostock 2007): L. very small. Plants of small stature.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 2–5 cm long. Ligule an eciliate membrane, acute. Leaf-blades curved, filiform, convolute, 1–2 cm long, 0.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted or spiciform, lanceolate or oblong, 1 cm long. Primary panicle branches bearing 1–3 fertile spikelets on each lower branch. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, glabrous. Floret callus glabrous or pubescent.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2–2.5 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex erose or dentate, 4 -fid, mucronate. Principal lemma awn (mucro) subapical. Rhachilla extension glabrous.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Deschampsia robusta C.E.Hubb. *Bull. Brit. Mus. (Nat. Hist.), Bot.*, 8(4): 391 (1981).

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

TYPE from Tristan da Cunha. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *N.M. Wace G245*, 13 Mar 1968, Tristan da Cunha: Gough Isl., wet heath community beside streams in valley to the E of South Peak (K).

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

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Butt sheaths coriaceous, glossy, persistent and investing base of culm. Culms erect, robust, 80–110 cm long, 3–5 mm diam., 2–5 -noded. Culm-internodes smooth, distally glabrous. Lateral branches lacking. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 8–15 mm long, acute. Leaf-blades filiform, flat or involute, 20–45 cm long, 4–7 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, scabrous, rough adaxially. Leaf-blade apex abruptly acute or acute, hardened.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 15–25 cm long, 4–5 cm wide, contracted about primary branches. Primary panicle branches 5–10 cm long, bearing spikelets almost to the base. Panicle axis scabrous. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–6 mm long.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–11 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite. Floret callus bearded. Floret callus hairs 3 mm long.

Glumes. Glumes persistent, similar, with lower narrower than upper, exceeding apex of florets, shiny, gaping. Lower glume lanceolate or elliptic, 8–11 mm long, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 8–11 mm long, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong or ovate, 5–5.5 mm long, membranous, shiny, without keel, 7 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, with lateral lobes bidentate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 7.5–8.5 mm long overall, with a straight or slightly twisted column. Palea oblong, 1 length of lemma, 2 -veined. Palea keels ciliate. Palea apex dentate, 2 -fid. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.7 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Antarctica.

Country /Province /State. Subantarctic islands. Tristan de Cunha.

Deschampsia setacea (Huds.) Hack. *Cat. Gram. Portugal.* 33 (1880).

Accepted by: R.J.Soreng et al., *Catalogue of 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.G.Tutin et al, *Flora Europaea* 5 (1980).

Basionym or Replaced Name: *Aira setacea* Huds., *Fl. Angl. ed.* 1: 30 (1762). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Habitat in ericetos Strattoniensi in comitatu Norfolk, *D. Stillingfleet*.

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (248).

Derivation (Clifford & Bostock 2007): L. seta, bristle; -acea, indicating resemblance. With bristle-like leaf-blades.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–60 cm long, 2–3 -noded. Leaves mostly basal. Leaf-sheaths smooth. Ligule an eciliate membrane, 2–8 mm long, acute. Leaf-blades filiform, involute, 5–20 cm long, 0.2–1 mm wide. Leaf-blade surface scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 6–15 cm long, 3–7 cm wide. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1–4 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or oblong, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes definite, pubescent. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 3–4 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 4–5 mm long, 1.6–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–3 mm long, membranous, shiny, without keel, 4 -veined, more than 3-veined. Lemma surface asperulous, rough above. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.2 way up back of lemma, geniculate, 3–6 mm long overall, with twisted column. Palea keels scaberulous. Rhachilla extension 0.5 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5–2 mm long. Ovary glabrous. Caryopsis with adherent pericarp, 1.5 mm long. Hilum punctiform.

$2n = 14$ (2 refs TROPICOS).

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

Region. Northern Europe, Middle Europe, Southwestern Europe.

Country /Province /State. : Denmark, Great Britain. **Southern South America.** Chile Central. Coquimbo, Santiago.

Deschampsia tenella R. Phil., non Petrie(1890). *Anal. Univ. Chil.* 94: 25 (1896).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *D. Petrie s.n.*, Dec 1889, New Zealand: Catlins' River, Clutha Co., Otago, 200 ft or less (WELT-609304a: ILT: K). LT designated by Edgar & Connor, *Fl. New Zealand* 5: 313 (2000).

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

Derivation (Clifford & Bostock 2007): L. slender. Culms or inflorescence branches slender.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–35 cm long. Ligule an eciliate membrane. Leaf-blades filiform, involute, 4–10 cm long, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–15 cm long. Primary panicle branches 2 -nate. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, pubescent. Floret callus pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet, shiny. Lower glume ovate, 0.8–1.2 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 1–1.5 mm long, 0.66–0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume apex acute.

Florets. Fertile florets all alike or with the lowest dissimilar (muticous). Fertile lemma oblong, 1.5–3 mm long, hyaline, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 3–4 -fid, truncate,

awned, 1 -awned. Principal lemma awn subapical or dorsal, arising 0.9 way up back of lemma, straight, 1.5–3 mm long overall. Palea hyaline. Palea keels ciliate. Rhachilla extension 0.4–0.5 length of fertile floret, pubescent.

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

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I, Stewart Is.

Deschampsia venustula L. Parodi. *Darwiniana*, 8: 450 (1949).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: IT: *R.A. Philippi* 206, 1892, Chile (US-556484).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (234, Fig. 150).

Derivation (Clifford & Bostock 2007): *L. venusta*, beautiful; -ula, diminutive.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, cushion forming. Culms 5–25 cm long. Ligule an eciliate membrane, 3–4 mm long, acute. Leaf-blades filiform, convolute, 1–2.5 cm long, 0.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 1–4 cm long. Primary panicle branches 1.5–2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, 1 mm long, pilose. Floret callus pilose. Floret callus hairs 0.7–1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, shiny. Lower glume lanceolate, 4 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein smooth or scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 4 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–3 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, with outer lobes longer, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 1.5 mm long. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central, Chile South.

TDWG4. Mendoza. Neuquén. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Santiago, Biobio. Magellanes.

Deschampsia wacei C.E.Hubb. *Bull. Brit. Mus. (Nat. Hist.), Bot.*, 8(4): 392 (1981).

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

TYPE from Tristan da Cunha. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tristan da Cunha, Gough Is.: Wace (BM holo).

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

Derivation (Clifford & Bostock 2007): In honor of Nigel Morritt Wace (1929–2005) English-born Australian botanist and geographer.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths coriaceous, glossy, persistent and investing base of culm. Culms erect, 6–40 cm long, 1–2 -noded. Culm-internodes smooth. Lateral branches lacking. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 2–10 mm long, acute. Leaf-blades curved, filiform, involute, 1–12 cm long, 0.6–1.3 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, smooth, glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate or oblong, 2.5–15 cm long. Primary panicle branches 1–3 cm long. Panicle axis smooth, glabrous. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–4 mm long, smooth.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 9–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite. Floret callus pilose. Floret callus hairs 1–2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, shiny, gaping. Lower glume lanceolate or elliptic, 9–10 mm long, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein smooth. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume lanceolate or oblong, 9–10 mm long, membranous, 1-keeled, 1–3 -veined. Upper glume primary vein smooth. Upper glume lateral veins absent or distinct. Upper glume apex acute.

Florets. Fertile lemma oblong or ovate, 5–6 mm long, membranous, shiny, without keel, 7 -veined, more than 3-veined. Lemma surface asperulous, rough above. Lemma apex dentate, 2 -fid, with lateral lobes bidentate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, straight, 5–10 mm long overall. Palea oblong, 1 length of lemma, 2 -veined. Palea keels scaberulous. Palea apex dentate, 2 -fid. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.2–1.4 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Antarctica.

Country /Province /State. Subantarctic islands. Tristan de Cunha.

Desmazeria lorentii H. Scholz. *Bot. Jahrb.*, 94(4): 559 (1974).

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

TYPE from Tunisia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Tunisia: Zaghwan.

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

Derivation (Clifford & Bostock 2007): in honor of J. August Lorent (1812–1884) American-born German botanist and traveller.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 7–15 cm long. Ligule an eciliate membrane, 6 mm long, acute. Leaf-blades flat or conduplicate, 3–6 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or oblong, secund, 3–7 cm long. Primary panicle branches simple. Panicle axis flat. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes obscured by lemmas, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume oblong, 3–4.5 mm long, 0.75–0.9 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume apex obtuse. Upper glume oblong, 3.5–5 mm long, 0.7–0.8 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume lateral veins ribbed. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 4–6 mm long, coriaceous, keeled, 5 -veined, more than 3-veined. Lemma apex obtuse, mucicous or mucronate. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Ovary glabrous. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northern Africa. Libya.

Desmazeria philistaea (Boiss.) H. Scholz. *Willdenowia*, 6(2): 291 (1971).

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

Basionym or Replaced Name: *Scleropoa philistaea* Boiss., *Diagn. Pl. Orient., ser. 1*, 13: 60 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *Boissier s.n.*, Gaza.

Recent Synonyms: *Coelachyrum annuum* T.A. Cope & L. Boulos, *Kew Bull.*, 42(4): 919 (1987).

Illustrations (Books): N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl.311 as *Cutandia*), L.Boulos, *Flora of Egypt* 4 (2005) (150, Fig 42).

Illustrations (Journals): *Kew Bulletin* (42): 920, Fig.1 (1987) as *Coelachyrium annuum*.

Derivation (Clifford & Bostock 2007): L. from Philistea now mostly Israel.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending or decumbent, 10–30 cm long. Ligule an eciliate membrane, 3 mm long, lacerate. Leaf-blades 2–7 cm long, 1–3 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle or composed of racemes. Panicle open, oblong or ovate, secund, 1.5–8 cm long. Primary panicle branches bearing 1–5 fertile spikelets on each lower branch. Racemes 1, single, unilateral. Rhachis angular. Spikelet packing broadside to rhachis. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 5–30 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, compressed strongly, 6–28 mm long, 3–5 mm wide, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes obscured by lemmas, pubescent.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume oblong, 3 mm long, 0.75 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume apex obtuse. Upper glume oblong, 4 mm long, 0.7–0.8 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume lateral veins ribbed. Upper glume apex obtuse.

Florets. Fertile lemma ovate, ovate in profile, 4–4.5 mm long, coriaceous, much thinner on margins, keeled, 5 -veined, more than 3-veined. Lemma midvein scaberulous. Lemma lateral veins with distinct primaries but obscure intermediates. Lemma surface pubescent, hairy below, with capitate hairs. Lemma hairs 0.2 mm long. Lemma apex obtuse. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 3–3.5 mm long. Ovary glabrous. Caryopsis with adherent pericarp, oblong, dorsally compressed, 2–2.2 mm long. Hilum punctiform.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Northern Africa.** Egypt, Libya, Tunisia. **Western Asia.** Lebanon-Syria, Palestine, Israel & Jordan.

Desmazeria sicula (Jacq.) Dumort. *Comment. Bot.* :27 (1822).

Accepted by: R.J.Soreng et al., *Catalogue of 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.G.Tutin et al, *Flora Europaea* 5 (1980).

TYPE from Sicily. **Basionym or Replaced Name:** *Cynosurus siculus* Jacq., *Observ. Bot.* 2: 22, t. 43 (1767). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sicily: Coll?.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (683).

Derivation (Clifford & Bostock 2007): L. a Sicilian. From Sicily.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending or decumbent, 8–25 cm long. Ligule an eciliate membrane, 1.4–2.5 mm long, erose. Leaf-blades 2–13 cm long, 1–2.5 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, oblong, unilateral, 2–4 cm long. Rhachis angular. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 8–20 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 5–20 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes obscured by lemmas.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 2.5–3 mm long, 0.75 length of upper glume, coriaceous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 3–3.5 mm long, 0.75 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 3.5–4 mm long, coriaceous, keeled, 7 -veined, more than 3-veined. Lemma midvein scaberulous. Lemma lateral veins with distinct primaries but obscure intermediates. Lemma surface pubescent, hairy below, with capitate hairs. Lemma hairs 0.2 mm long. Lemma apex acute. Palea 2 -veined. Palea keels winged, narrowly winged, ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, oblong, dorsally compressed, concavo-convex. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Europe, Africa.

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

Country /Province /State. : GB Aliens (Ryves et al). : Sardinia, Spain. : Italy, Sicily. **Northern Africa.** Libya, Tunisia.

Desmostachya bipinnata (L.) Stapf. Dyer, *Fl. Cap.* 7 : 632 (1900).

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 Egypt. **Basionym or Replaced Name:** *Briza bipinnata* L., *Fl. Palaest.* 12 (1756). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Hasselquist s.n.*, Egypt (LINN-89.2). LT designated by Danin in Cafferty et al., *Taxon* 49(2): 248 (2000).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (199, Fig. 122), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 383), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (132, Fig 54), L.Boulos, *Flora of Egypt* 4 (2005) (270, Pl. 80), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (191, Fig 103), N.L.Bor, *Gramineae* in K.H.Rechinger, *Flora Iranica*. No. 70/30 (1970) (Tab. 61), N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (430, Pl. 162), K.M.Matthew, Illustrations on the *Flora of Tamilnadu Carnatic* (1982) (Pl. 843), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (110, Fig 12), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 681), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:59(1980)).

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

Derivation (Clifford & Bostock 2007): L. bis, twice; pinna, feather; -ata, possessing. Inflorescence of sessile spikelets on short lateral shoots arising from a central axis.

Classification. Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes elongated, scaly. Butt sheaths scarious, pallid or dark brown, glabrous. Basal innovations intravaginal, flabellate. Culms erect, 50–100 cm long. Leaves mostly basal. Leaf-sheaths as wide as blade at the collar, smooth, glabrous on surface. Ligule a ciliate membrane, 0.5–1 mm long. Leaf-blades convolute, 10–50 cm long, 2–6 mm wide, coriaceous, stiff, glaucous. Leaf-blade surface ribbed. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, closely spaced, in a multilateral false spike, spreading, oblong, unilateral, 1–2 cm long. Central inflorescence axis 15–40 cm long. Rhachis semiterete, puberulous on surface. Spikelet packing broadside to rhachis, crowded. Spikelets spreading, solitary. Fertile spikelets sessile. Pedicels absent.

Fertile Spikelets. Spikelets comprising 2–18 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 2.5–13 mm long, falling entire. Rhachilla internodes eventually visible between lemmas.

Glumes. Glumes similar, shorter than spikelet. Lower glume ovate, 0.7–1.5 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.1–2 mm long, 0.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets free at tip. Fertile lemma ovate, laterally compressed, 1.5–1.8 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous. Lemma lateral veins obscure, close to margins. Lemma apex acute. Palea oblong, 1 length of lemma, 2 -veined. Palea keels scaberulous. Palea apex entire, acute. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy, entire, emarginate. Anthers 3, linear. Stigmas 2, laterally exerted. Caryopsis with adherent pericarp, ovoid, trigonous, without sulcus. Embryo 0.3–0.4 length of caryopsis. Hilum punctiform. Disseminule comprising a spikelet.

$2n = 20$ (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. Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Western Asia, Arabian Peninsula, China. Iran, Iraq, Gulf States, Oman. Hainan. Indian Subcontinent, Indo-China, Malesia. Assam, Bangladesh, India, Pakistan, West Himalaya. Cambodia, Myanmar, Thailand, Vietnam. Cocos (Keeling) Is, Lesser Sunda Is.

TDWG4. Bihar. Tamilnadu, Uttah Pradesh, West Bengal. Himachal Pradesh, Jammu Kashmir.

Deyeuxia abnormis (Hook.f.) U. Shukla. *Grasses N.-East. India:* 45 (1996).

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

TYPE from India?. **Basionym or Replaced Name:** *Calamagrostis abnormis* (Hook.f.) U. Shukla, *Grasses N.-East. India:* 45 (1996). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J.D. Hooker & Thomson, Agrostis* 12, (K (right-hand specimen, with branched culms); ILT: L). LT designated by

Korthof & Veldkamp, *Gard. Bull. Singapore* 37(2): 218 (1984), without indicating a specific specimen; specific specimen designated by Noltie, *Edinburgh J. Bot.* 56(3): 386 (1999).

LT: *Hooker & Thomson 1232, Agrostis 12*, India: Khasia: Surureem (K). LT designated by Bor, *Kew Bull.* 9: 441–442 (1954), but this lectotypification is in conflict with the protologue and therefore to be rejected, according to Noltie, *Edinburgh J. Bot.* 56(3): 384 (1999).

ST: *Griffith & c. s.n.*, India: Khasia Hills, 5–5500 ft.

ST?: *J.D. Hooker*, Sikkim: Lachong Valley, 9000 ft.

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

Derivation (Clifford & Bostock 2007): *L. ab-*, away from; *norma*, model. Differing from the expected.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms rambling, slender, 50–100 cm long, wiry. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 6–12 cm long, 2–4 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, 11 cm long, 8 cm wide, bearing few spikelets. Panicle axis smooth, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 3.5 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume lanceolate, 3 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

Florets. Fertile lemma ovate, 2.75 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma apex mucous. Palea 1.5 mm long, 0.5 length of lemma, hyaline. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** Eastern Himalaya, India.

TDWG4. Yunnan.

Deyeuxia acuminata Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 73 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis acuminata* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Guyra: *McKie 658* (K holo).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (199).

Derivation (Clifford & Bostock 2007): leaf-blades acute.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, robust, 100 cm long, 5 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaves cauline. Leaf-sheaths striately veined, scaberulous. Ligule an eciliate membrane, 4–8 mm long, pubescent on abaxial surface, lacerate, truncate. Leaf-blades 15–30 cm long, 2–5 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially, pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 20–40 cm long. Primary panicle branches spreading, 3–6 -nate. Panicle axis with lower internodes 6–10 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 1–4 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 5–5.5 mm long,

breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose or bearded. Floret callus hairs 0.7–2 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma, parallel to lemmas. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 4 mm long, 0.75 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 5–5.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, 1–1.5 mm long overall. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Palea surface scaberulous. Rhachilla extension 0.5–1 mm long, pilose, with 1.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2–2.3 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales.

TDWG4. Tablelands.

Deyeuxia affinis M. Gray. *Contrib. Herb. Austral.*, 26: 9 (1976).

Regarded by K as a synonym (*D. pyramidalis*).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis affinis* (M. Gray) R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 : (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Mt. Kosciusko: *Gray 6759 & Totterdell* (CANB holo).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (199), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. allied to. Closely allied to another species.

Classification. Subfamily Pooideae. Tribe: Poeae.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, Victoria.

TDWG4. Tablelands.

Deyeuxia angustifolia (Komarov) Chang, non Vickery (1940). T. N. Liou, *Claves Pl. Chin. Bor.-Or.* 492 (1959).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis angustifolia* Komarov, *Not. Syst. Herb. Hort. Bot. U.S.S.R.* 6: 1 (1926). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Blue Mts., Wentworth Falls: *Vickery K32* (K holo, CANB, NSW).

Recent Synonyms: *Calamagrostis linifolia* R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (199), 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. angustus, narrow; folium, leaf. Leaf-blades narrow.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths green or purple. Culms erect, 30–70 cm long, 4 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, scaberulous. Ligule an eciliate membrane, 1–2 mm long, scaberulous on abaxial surface, truncate. Leaf-blades involute, 15–30 cm long, 1–2 mm wide. Leaf-blade surface ribbed, grooved adaxially or abaxially, scabrous, rough on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 2–9 cm long, 0.4–0.7 cm wide. Primary panicle branches appressed. Panicle axis with lower internodes 1–1.5 cm long, scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, gaping. Lower glume lanceolate, 1 length of upper glume, chartaceous, mid-green or purple, 1-keeled, 7 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 4–5 mm long, 1 length of adjacent fertile lemma, chartaceous, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins distinct. Lemma surface scaberulous. Lemma apex entire or dentate, 2 -fid, truncate, awned, 1 -awned. Principal lemma awn subapical, 1 mm long overall. Palea 1 length of lemma. Palea keels scaberulous. Rhachilla extension 0.2 mm long, glabrous.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T.

TDWG4. Coast, Tablelands.

Deyeuxia anthoxanthoides (Munro) Regel. *Act. Hort. Petrop.* 7: 640 (1880).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Calamagrostis*).

TYPE from Afghanistan. **Basionym or Replaced Name:** *Stilpnophleum anthoxanthoides* (Munro) Nevski, *Acta Inst. Bot. Acad. Sc. URSS*, Ser. 1 Fasc. 3, 144 (1937). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Afghanistan, Sanju Pass: Henderson & Hume (K holo).

Recent Synonyms: *Calamagrostis anthoxanthoides* (Munro ex Hook. f.) Regel, *Trudy Imp. S.-Peterburgsk. Bot. Sada* 7: 639 (1881)

Illustrations (Books): N.L.Bor, *Gramineae* in K.H.Rechinger, *Flora Iranica*. No. 70/30 (1970) (Tab. 42 as *Stilpnophleum*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 488).

Derivation (Clifford & Bostock 2007): Gk. anthos, flower; xanthos, yellow. Mature spikelets yellow-green.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 15–35 cm long, 1 -noded. Lateral branches lacking. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 7–15 cm long, 2–3 mm wide. Leaf-blade surface smooth or scaberulous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 2–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 5–7 mm long, 1.2–1.8 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 4 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 7–7.5 mm long overall, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined. Rhachilla extension glabrous or pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Middle Asia, Western Asia, China. Tadzhikistan, Uzbekistan. Afghanistan, Iran. Tibet, Xinjiang.

TDWG4.

Deyeuxia appressa Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 54 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis appressa* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J. Vickery 102A*, 9 Nov 1930, Australia: New South Wales, George's River, Herne Bay (K, SYD, US-1816916 (culm ex SYD)).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (200), 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. appressed*. Lateral branches of panicle held erect.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 90 cm long, 5 -noded. Culm-internodes antrorsely scabrous. Culm-nodes glabrous. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1–2 mm long, pubescent on abaxial surface, lacerate, truncate. Leaf-blades flat or involute, 10–30 cm long, 2–4 mm wide. Leaf-blade surface ribbed, scabrous, rough abaxially, pubescent, densely hairy, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, interrupted, 20–30 cm long. Primary panicle branches appressed, 3–4 -nate. Panicle axis with lower internodes 3–6 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–1.2 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4.5 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 2–4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, curved, 5 mm long overall, without a column. Palea keels scaberulous, adorned above. Palea apex ciliate.

Flower and Fruit. Lodicules 2. Anthers 3, 0.8 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales.

TDWG4. Coast.

Deyeuxia apsleyensis D.I. Morris. *Muelleria*, 7(2): 160 (1990).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia, Tasmania. **Basionym or Replaced Name:** *Calamagrostis apsleyensis*. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Tasmania: Apsley River area, north of Apsley Gorge, 3 Feb 1988, *F. Duncan s.n.* (HT: HO-111147; IT: NSW).

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. -ensis*, denoting origin. From Apsley River, Tasmania.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths pilose. Culms erect, slender, 50–90 cm long. Culm-internodes mid-green or purple, smooth or scaberulous, distally glabrous or pilose. Culm-nodes purple, glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, smooth or retrorsely scabrous, glabrous on surface or pilose. Ligule a ciliolate membrane, 1 mm long, pubescent on abaxial surface, obtuse. Leaf-blades conduplicate or involute, 15–35 cm long, 1–1.5 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, elliptic, 7–14 cm long. Primary panicle branches 2–4.5 cm long. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both

fertile or the upper sterile. Spikelets oblong, laterally compressed, 5.5–6.75 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 1.5 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–5 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute or acuminate. Upper glume lanceolate, 5–6.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex acute or acuminate.

Florets. Fertile lemma lanceolate, 5–6.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 7.5–8 mm long overall, with twisted column. Palea 1 length of lemma. Palea keels ciliolate. Rhachilla extension 1.5 mm long, pilose, with 1–1.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp, 3 mm long. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Deyeuxia aucklandica (Hook.f.) Zotov. *Rec. Dom. Mus.* 5:139 (1965).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Agrostis aucklandica* Hook. f., *Fl. Antarct.* 1: 96 (1845). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand, Auckland Is., Port Ross: Aston (WELT neo).

Recent Synonyms: *Calamagrostis setifolia* (Hook. f.) Cockayne, *Rep. Bot. Surv. Tongariro Nat. Park*, 35 (1908).

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

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From the Auckland Islands.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths coriaceous, green or light brown. Basal innovations extravaginal. Culms erect or geniculately ascending, 6–35 cm long. Leaf-sheaths striately veined, smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 0.5–2 mm long, glabrous on abaxial surface or scaberulous on abaxial surface, truncate. Leaf-blades filiform, conduplicate, 2.5–15 cm long, 0.3–1.5 mm wide. Leaf-blade surface scabrous, rough abaxially or on both sides. Leaf-blade margins scaberulous. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Peduncle smooth or antrorsely scabrous above. Panicle spiciform, linear, loose, 2–5.5(–11) cm long, 0.3–1.8 cm wide. Primary panicle branches whorled at most nodes. Panicle axis smooth or scabrous. Panicle branches smooth or scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1.5–2.5 mm long, 0.5–0.66 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of upper glume, membranous, 1-keeled, 1–3 -veined. Lower glume primary vein smooth or scabrous. Lower glume lateral veins absent or obscure. Lower glume surface smooth or asperulous, rough at apex. Lower glume apex acute. Upper glume subulate or lanceolate, 5–6 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume primary vein smooth or scabrous. Upper glume lateral veins absent or distinct. Upper glume surface smooth or asperulous, rough at apex. Upper glume apex acute.

Florets. Fertile lemma lanceolate or ovate, 2.4–3.8 mm long, membranous, much thinner above, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or scaberulous or papillose. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, straight or geniculate, 2–4.5 mm long overall, with a straight or slightly twisted column. Palea 1 length of lemma. Palea keels scabrous, adorned above, with 0.5 of their length adorned. Palea surface smooth or scaberulous. Rhachilla extension 1–1.5 mm long, pilose, with 1–2 mm long hairs.

Flower and Fruit. Lodicules 2, lanceolate, 0.6–1 mm long. Anthers 3, 0.6–1.4 mm long. Stigmas 2. Caryopsis with adherent pericarp, 1.6–2.2 mm long. Hilum punctiform.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand North I, New Zealand South I, Stewart Is, Auckland Is.

Deyeuxia avenoides (Hook.f.) J. Buch. *Man. Grass. N. Zeal.* p. 6: (1880).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Agrostis avenoides* Hook. f., *Handb. N. Zeal. Fl.* 330 (1864)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Sinclair & Haast s.n.*, 1860–1861, New Zealand: Prov. Canterbury: grassy downs, Rangitata river (K). LT designated by Edgar, *New Zealand J. Bot.* 33: 8, 10 (1995).

Recent Synonyms: *Calamagrostis avenoides* (Hook. f.) Cockayne, *New Zealand Department Lands Report Botanical Survey Tongariro National Park* 35 (1908)

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

Derivation (Clifford & Bostock 2007): Gk. -oides, similar to. Resembling *Avena* in spikelet structure.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 20–60 cm long. Leaf-sheaths ribbed, smooth. Ligule an eciliate membrane. Leaf-blades filiform, involute, 3–9 cm long, 0.5–1 mm wide. Leaf-blade surface smooth.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 5–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.5–0.7 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 5–6 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent or obscure. Upper glume surface smooth or asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4.5–5 mm long, membranous, without keel, more than 3-veined. Lemma apex dentate, 2–4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 4–6 mm long overall, with twisted column. Rhachilla extension 0.5 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. Chatham Is, New Zealand North I, New Zealand South I, Stewart Is.

Deyeuxia boormanii (Vickery) N.G.Walsh. *Fl. Australia* 44A: 386 (2009).

TYPE from Australia. **Basionym or Replaced Name:** *Deyeuxia parviseta* var. *borrmannii* Vickery, *Contrib. NSW Nat. Herb.* 1:72 (1940). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Buddawang, near Braidwood, N.S.W., Feb 1909, *J.L.Boorman K.55*; lecto:NSW, *fide* N.G.Walsh *loc.cit.*; isolect:K.

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, (30–)50–150 cm long, 1–3 -noded. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–5 mm long, truncate. Leaf-blades flat or conduplicate, 10–35 cm long, 2–5 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, (6–)15–35 cm long. Primary panicle branches spreading or drooping. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2.5(–5) mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–2.8 mm long, breaking up at maturity,

disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1–2 mm long, 0.5 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 2.2–2.8 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface smooth. Lemma apex acute, muticous or awned, 1 -awned. Principal lemma awn subapical, straight, 0.5 mm long overall, not or scarcely exerted from spikelet. Rhachilla extension 0.5–1 mm long, pilose.

Flower and Fruit. Anthers 3, 0.5–0.6 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, Victoria.

Deyeuxia brachyathera (Stapf) Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 68 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

Basionym or Replaced Name: *Dichelachne brachyanthera* Stapf, *Bull. Misc. Inform. Kew* 1906: 203 (1906). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gregson s.n. (Gryson)*, (K).

Recent Synonyms: *Calamagrostis brachyathera* (Stapf) R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 (1999).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (200), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): Gk. brachys, short; ather, ear or spike of wheat. Spikelet with a minute rachilla projection.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 60–120 cm long, 4-noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 3 mm long, scaberulous on abaxial surface, obtuse. Leaf-blades 20–35 cm long, 3–7 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 8–17 cm long, 0.8–2 cm wide. Primary panicle branches 3–5 -nate. Panicle axis with lower internodes 2–3 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.3–0.8 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1–3 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent or obscure. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4.5–6 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins distinct. Lemma surface scaberulous. Lemma apex entire or dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.75–0.85 way up back of lemma, curved, 4–5 mm long overall. Palea 2.5–4 mm long. Palea keels scaberulous, adorned above. Rhachilla extension glabrous.

Flower and Fruit. Lodicules 2. Anthers 3, 0.4–0.7 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Coast, Tablelands.

Deyeuxia breviglumis Benth. *Fl. Austral.* 7 : 584 (1878).

More checking of status required.

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Ancistagrostis gunniana*), 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: New South Wales: New England, C. *Stuart s.n.*.

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

Derivation (Clifford & Bostock 2007): L. brevis, short; gluma, husk. One or both glumes short with respect to the length of the spikelet.

Classification. Subfamily Pooideae. Tribe: Poeae.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T.

TDWG4. Coast, Tablelands.

Deyeuxia carinata (Vickery) R. Govaerts. *World Checklist Seed Plants*, 3(1): 10 : (1999).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis carinata* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Mt. Kosciuszko: *Mueller* (K holotype).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (479, Fig 93), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (200), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (196, Fig 27), 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): leaf-blades keeled at the tip.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 20–30 cm long, 3-noded. Leaf-sheaths longer than adjacent culm internode, striately veined, scaberulous. Ligule a ciliolate membrane, 5–6 mm long, pubescent on abaxial surface, erose, truncate. Leaf-blades flat or conduplicate, 5–8 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex abruptly acute, callose.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 8 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–1.2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, 1-keeled, 1-veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminate, mucronate. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 1-veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 5–5.5 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma apex dentate, 2-fid, truncate, awned, 1-awned. Principal lemma awn dorsal, arising 0.6 way up back of lemma, geniculate, 4 mm long overall, with twisted column. Palea 3.5 mm long. Palea keels scaberulous, adorned above. Rhachilla extension 0.5 mm long, glabrous.

Flower and Fruit. Lodicules 2. Anthers 3, 0.7 mm long, retained within floret. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Tablelands.

Deyeuxia conferta Keng. *Sunyatsenia*, 6: 68 (1941).

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

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China, Lan Hwa: Ching 800.

Recent Synonyms: *Calamagrostis conferta* (Keng) P.C. Kuo & S.L. Lu, *Fl. Intramongolica*, 7: 172 (1983).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 496).

Derivation (Clifford & Bostock 2007): *L. confertio*, cram together. Inflorescence branches densely crowded.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–90 cm long, 2 mm diam., 1–2-noded. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 5–10 mm long. Leaf-blades 15–30 cm long, 2–4 mm wide, glaucous. Leaf-blade surface scabrous, glabrous or pilose, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, continuous or interrupted, 9–14 cm long, 1–2 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1–1.1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 5 mm long, 1 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 3-veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3.5 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma apex erose, awned, 1-awned. Principal lemma awn dorsal, arising 0–0.1 way up back of lemma, straight, 3–4 mm long overall, without a column. Rhachilla extension 0.5 mm long, pilose, with 1–2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2–2.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG), Continent. Temperate Asia.

Country /Province /State. China. Inner Mongolia, China North-Central, Qinghai.

TDWG4. Gansu, Shaanxi. Nei Mongol.

Deyeuxia contracta (F. Mueller ex J.D. Hook.) Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 65 (1940).

More checking of status required.

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis neocontracta*), U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), D. Sharp, D. & B.K. Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Agrostis contracta* F. Muell. ex Hook. f., *Fl. Tasm.* 2: 116 (1858). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, South Huon R.: Oldfield 120 (K holotype).

Recent Synonyms: *Calamagrostis contracta* R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). *Calamagrostis neocontracta* Govaerts, *World Checklist Seed Plants* 3(1): 11 (1999).

Illustrations (Books): N. Walsh & T. Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), S.W.L. Jacobs, R.D.B. Whalley & D.J.B. Wheeler., *Grasses of New South Wales*, 4th edn (2008) (201), D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. contracted*. Inflorescence a narrow panicle.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect or geniculately ascending, 30–90 cm long, 4-noded. Culm-internodes smooth. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–3 mm long, obtuse. Leaf-blades 4–17 cm long, 2–3.5 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, equilateral or nodding, 7–20 cm long. Primary panicle branches 2–4-nate. Panicle axis with lower internodes 2–3 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–1.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.7 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.8 length of upper glume, membranous, much thinner on margins, 1-keeled, 1-veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous.

Lower glume apex acute. Upper glume lanceolate, 2.5–3 mm long, 1 length of adjacent fertile lemma, membranous, with scarious margins, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.5–3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, 0.5–1 mm long overall. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Rhachilla extension 0.6 mm long, glabrous.

Flower and Fruit. Lodicules 2. Anthers 3, 0.3 mm long. Stigmas 2. Caryopsis with adherent pericarp, oblong. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Coast, Tablelands.

Deyeuxia crassiuscula Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 59 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Agrostis nivalis* F. Muell., *Trans. Vict. Inst.* 43 (1855). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Mt. Buller: *Mueller* (K holotype).

Recent Synonyms: *Calamagrostis crassiuscula* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (201), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), 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. crassius*, thicker; -ula, diminutive. With thick leaf-blades.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 15–30 cm long, 5–7 -noded. Leaf-sheaths longer than adjacent culm internode, smooth. Ligule a ciliolate membrane, 1–2 mm long, scaberulous on abaxial surface or pubescent on abaxial surface, lacerate, truncate. Leaf-blades flat or involute, 3–10 cm long, 4–6 mm wide. Leaf-blade surface ribbed, smooth or scabrous, rough abaxially, puberulous, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 6–7 cm long, 0.7–1.2 cm wide. Panicle axis with lower internodes 1.5–2 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.8–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.5–1.4 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, parallel to lemmas. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute, muticous or mucronate. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute, muticous or mucronate.

Florets. Fertile lemma lanceolate, 4 mm long, cartilaginous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex truncate or acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 0.5–6 mm long overall, without a column. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Palea surface scaberulous. Rhachilla extension 0.7 mm long, glabrous.

Flower and Fruit. Lodicules 2. Anthers 3, 1–1.2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria. Tablelands.

Deyeuxia debilis (Hook. f.) J.F. Veldkamp. *Gard. Bull. Singapore*, 37(2): 220 (1984).

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

TYPE from India. **Basionym or Replaced Name:** *Calamagrostis debilis* Hook. f., *Fl. Brit. Ind.* 7: 260 (1896). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: India, Sikkim, Chola: Hooker (K holo).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (as *Calamagrostis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 494).

Derivation (Clifford & Bostock 2007): L. weak. Culms decumbent often much branched at the base.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 30–45 cm long. Leaf-sheaths smooth. Ligule an eciliate membrane. Leaf-blades 2.5–5 cm long, 1–2 mm wide. Leaf-blade surface smooth.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 5–13 cm long. Panicle branches smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 2–3 mm long, 1–1.1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 4–5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4–5 mm long, 2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2–2.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, geniculate, 5–7 mm long overall, with a straight or slightly twisted column. Palea 1 length of lemma, hyaline.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp. Hilum linear.

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

Country /Province /State. China. Tibet. **Indian Subcontinent.** Eastern Himalaya. Sikkim.

Deyeuxia decipiens (R. Br.) Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 70 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Agrostis decipiens* R. Br., *Prodr.* 1: 172 (1810). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Port Jackson: Brown 6221 (BM holo, K).

Recent Synonyms: *Calamagrostis decipiens* (R. Br.) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (201), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (133, Fig. 20), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. decipio, deceive. Resembling another species, or in some other way deceptive.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 45–100 cm long, 3–4 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–4 mm long, scaberulous on abaxial surface, lacerate, truncate or obtuse. Leaf-blades filiform or linear, convolute, 10–30 cm long, 3–4 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, nodding, 12–30 cm long. Primary panicle branches 2–8 -nate. Panicle axis with lower internodes 5–6 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent or pilose. Floret callus hairs 0.4–1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate, 0.9–1 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 2–3 mm long, 1 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2–3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins distinct. Lemma surface asperulous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, 0.5–1 mm long overall. Palea 0.9 length of lemma, hyaline. Palea keels scaberulous, adorned above. Palea apex undifferentiated or ciliate.

Flower and Fruit. Lodicules 2. Anthers 3, 0.7 mm long. Stigmas 2. Caryopsis with adherent pericarp, lanceolate or oblong. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Coast, Tablelands.

Deyeuxia densa Benth. *Fl. Austral.* 7: 582 (1878).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis austrodensa*), 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: *F. Mueller s.n.*, Australia: Victoria: Wilson's Promontory, Maroka Valley and the Yarra River

ST: *F. Mueller s.n.*, Australia: South Australia: Lofty Ranges and Onkaparinga.

Recent Synonyms: *Calamagrostis austrodensa* R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 (1999). *Calamagrostis densa* (Benth.) Maiden & Betche.

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (212, Fig 158), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (196, Fig 27), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): panicle with many spikelets.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms slender, 30–50 cm long, 3–4 -noded. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 3–4 mm long, scaberulous on abaxial surface, entire or erose, obtuse. Leaf-blades flat or involute, 2–10 cm long, 1–2 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or oblong, 7–15 cm long, 1–1.5 cm wide. Primary panicle branches appressed. Panicle axis with lower internodes 1–1.5 cm long, scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex attenuate. Upper glume lanceolate, 5–5.5 mm long, 1 length of adjacent fertile lemma, membranous, with scarious margins, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 5–5.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma apex entire or erose, acute, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 5 mm long overall, clearly exerted from spikelet, with twisted column. Palea 3.5–4 mm long. Palea keels scaberulous, adorned above. Rhachilla extension 2 mm long, pilose, with 1.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 0.5–1.2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. South Australia, Victoria, Tasmania.
TDWG4. Southern.

Deyeuxia diemii Rúgolo. *Darwiniana* 19 (2–4): 404, f. 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 (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina: Neuquen: Depto. LosLagos, cercanias del refugio Co. Colu-Mahuída, 1600 m, *Diem 254* (HT: BAA).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (360, Fig 241as *Deyeuxia*).

Illustrations (Journals): *Darwiniana* (44(1) (2006) as *Deyeuxia*).

Derivation (Clifford & Bostock 2007): in honor of Josie Diem (1899-) German-born Argentinian botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms geniculately ascending, 10–25 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.5–3 mm long, erose, acute. Leaf-blades straight, conduplicate, 3–5 cm long, 1–2 mm wide, firm. Leaf-blade surface pilose, hairy adaxially. Leaf-blade apex abruptly acute, hooded.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 3–6 cm long. Primary panicle branches appressed. Panicle branches with scattered hairs or glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.6–4.1 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation 0.2–0.3 mm long. Floret callus pilose. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 1.4 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.6–3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex entire or erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 3.5–4 mm long overall, not or scarcely exerted from spikelet. Rhachilla extension 0.8–1 mm long, pilose.

Flower and Fruit. Lodicules 2, 0.6–0.7 mm long. Anthers 3, 1.3–1.6 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp, ovoid, sulcate on hilar side, 1.6–1.9 mm long. Embryo 0.25 length of caryopsis. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South, Chile Central.

TDWG4. Neuquén. Maule.

Deyeuxia diffusa Keng. *Sunyatsenia*, 6: 94 (1941).

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

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China, Yunnan: Maire 6863 (NY holo).

Recent Synonyms: *Calamagrostis diffusa* (Keng) P.C. Keng, *Bull. Bot. Res. North-East. Forest. Inst.*, 4(3): 195 (1984).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 472).

Derivation (Clifford & Bostock 2007): L. widely spreading. Inflorescence an open panicle.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Ligule an eciliate membrane.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, 30 cm long. Primary panicle branches 6-nate, 7–15 cm long. Panicle branches capillary, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both

fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 2.5–3 mm long, 1.4 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.7–2.2 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2–2.2 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex entire, emarginate or obtuse, mucicous. Palea 0.75 length of lemma. Rhachilla extension 0.6 mm long, pilose, with 1–1.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 0.6 mm long. Stigmas 2. Caryopsis with adherent pericarp, oblong, 1.5 mm long. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Guizhou, Sichuan, Yunnan.

Deyeuxia drummondii (Steud.) Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 49 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Dichelachne drummondiana* Steud., *Syn. Pl. Glumac.* 1: 120 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Drummond IV, 371*, Australia: Western Australia: fl. Cygnorum (P; IT: K (photo, SI), L, LE). L lists their specimen as HT.

Recent Synonyms: *Calamagrostis drummondii* (Steud.) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999).

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (157, Pl 47), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms decumbent, slender, 5–25 cm long. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 2–3.5 mm long, lacerate. Leaf-blades 1–1.5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or oblong, 1.5–4 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long.

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

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2–2.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Palea 0.8 length of lemma.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia.

TDWG4. South-West.

Deyeuxia echidnae Veldk. *Blumea* 37(1): 229 (1992).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Womersley NGF 8971*, Aug 1956, Papua New Guinea: New Guinea: Chimbu: Whihelm Mt., -2.45 S Lat., 145.05 E Long., 4451 m (L).

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

Derivation (Clifford & Bostock 2007): leaf-blades stiff and quill-like, vaguely reminiscent of the spines of an echidna.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30 cm long. Ligule an eciliate membrane, 6–9 mm long. Leaf-blades aciculate, involute, 7–9 cm long, 1.5–1.8 mm wide, stiff. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 11 cm long, 3 cm wide. Primary panicle branches 2-nate, 3.5 cm long, bearing 8 fertile spikelets on each lower branch. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 2–2.5 mm long, 0.66 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4.5–5 mm long, 1 length of upper glume, coriaceous, purple, 1-keeled, 1-veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4.5–5 mm long, 1.5 length of adjacent fertile lemma, coriaceous, purple, 1-keeled, 3-veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 3–3.2 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma surface smooth, glabrous. Lemma apex dentate, 4-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 1 mm long overall, not or scarcely exerted from spikelet. Rhachilla extension 1.25 mm long, pilose, with 1.25 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1 mm long, retained within floret. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaia. New Guinea PNG. New Guinea.

Deyeuxia effusiflora Rendle. *J. Linn. Soc., Bot.* 36(254): 392 (1904).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), 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: Sichuan:, *Rockhill s.n.* (HT: K).

Recent Synonyms: *Calamagrostis effusiflora* (Rendle) P.C. Kuo & S.L. Lu ex J.L. Yang, *Fl. Sichuanica*, 5(2): 88 (1988).

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

Derivation (Clifford & Bostock 2007): L. effusus, spread out; flos, flower. Inflorescence an open panicle.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Ligule an eciliate membrane.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 20–35 cm long. Primary panicle branches ascending or spreading, 4–5-nate, whorled at most nodes, 10–15 cm long. Panicle axis scaberulous. Panicle branches capillary, flexuous, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 3.5 mm long, 1.1 length of upper glume, membranous, purple, 1-keeled, 1-veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex obtuse. Upper glume elliptic, 3 mm long, 1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3-veined. Upper glume surface asperulous. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 3 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma apex dentate, 4-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0–0.1 way up back of lemma, geniculate, 5 mm long overall, with twisted column. Palea 3 mm long. Rhachilla extension pilose, with 1.5–2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

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

TDWG4. Gansu, Shaanxi. Ningxia. Henan, Zhejiang. Guizhou, Sichuan, Yunnan.

Deyeuxia exilis Veldkamp. *Alpine Fl. New Guinea* 2: 1145 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: J.F. Veldkamp & P.F. Stevens 5605, 14 Jun 1972, Papua New Guinea: New Guinea: Milne Bay, Suckling, -9.4 S Lat., 148.56 E Long., 2065 m (L).

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

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. New Guinea PNG. New Guinea.

Deyeuxia flaccida (Keng ex Keng f.) Keng ex S.L. Lu. *Fl. Reipubl. Popularis Sin.* 9(3): 223, pl. 55, f. 4–6 (1987).

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

TYPE from China. **Basionym or Replaced Name:** *Calamagrostis flaccida* Keng ex Keng f., *Bull. Bot. Res., Harbin* 4(3): 195–196 (1984)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China, Sichuan, Mt. Emei: Keng & Keng 3797 (PE holo, K).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 472).

Derivation (Clifford & Bostock 2007): L. unable to support its own weight. Inflorescence branches long and thin and so droop.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms slender, 100 cm long, 1 mm diam., 6 -noded, with 0.66 of their length below uppermost node. Culm-internodes smooth or scaberulous. Lateral branches lacking. Leaf-sheaths 16 cm long, antrorsely scabrous. Ligule an eciliate membrane, 1–4 mm long, lacerate. Leaf-blades 5–17 cm long, 1–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 18 cm long, 14 cm wide. Primary panicle branches drooping, 2–5 -nate, 10 cm long. Panicle branches capillary, smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 2–4 mm long, scabrous, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 3 mm long, 0.75 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4 mm long, 1.1 length of upper glume, membranous, light green or purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.5 mm long, 1 length of adjacent fertile lemma, membranous, light green or purple, 1-keeled, 3 -veined. Upper glume primary vein smooth. Upper glume lateral veins obscure. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 3.5 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, obtuse, muticous. Palea 0.5 length of lemma, hyaline, 2 -veined. Rhachilla extension 0.8 mm long, villous, with 2.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 0.7 mm long. Stigmas 2. Caryopsis with adherent pericarp, fusiform, 2 mm long, light brown. Hilum punctiform.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Sichuan, Yunnan.

Deyeuxia flavens Keng. *Sunyatsenia* 6 : 67 (1941).

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

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China, Xiahe: Yao 515 (N holotype).

Recent Synonyms: *Deyeuxia longiflora* P.C. Keng, *Fl. Yunnan*. 9: 378. 2003 (2003). *Calamagrostis venusta* (Keng) Tsvelev, *Akad. Nauk SSSR Bot. Inst. Komarova, Rast. Tsentral. Azii, Fasc.* 4, 87 (1968).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 479).

Derivation (Clifford & Bostock 2007): *L. flaveo*, be yellow. Spikelets yellow-brown.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–40 cm long, 2 mm diam., 2-noded. Culm-internodes elliptical in section. Lateral branches lacking. Leaf-sheaths loose, glabrous on surface. Ligule an eciliate membrane, 4–6 mm long, truncate or obtuse. Leaf-blades 4–12 cm long, 2–5 mm wide. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, ovate, 12 cm long. Primary panicle branches ascending. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.25–0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 5.5–7 mm long, 1 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 5.5–7 mm long, 1.2–1.6 length of adjacent fertile lemma, membranous, 1-keeled, (1–)3-veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent or obscure. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 4.5 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma apex awned, 1-awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 6–7 mm long overall, with twisted column. Palea 2-veined. Rhachilla extension 1 mm long, pilose, with 2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Temperate Asia.

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

TDWG4. Gansu, Sichuan, Yunnan.

Deyeuxia frigida F. Muell. ex Benth. *Fl. Austral.* 7: 583 (1878).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), 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: *F. Mueller s.n.*, Australia: Victoria: Mount Buller

ST: *Gunn s.n.*, Australia: Tasmania: New Norfolk

ST: *Oldfield s.n.*, Australia: Tasmania.

Recent Synonyms: *Calamagrostis frigida* (Benth.) Maiden & Betche, *Census N. S. Wales Pl.* 21 (1916).

Illustrations (Books): N. Walsh & T. Entwistle, *Flora of Victoria* Vol 2 (1994) (479, Fig 93), S.W.L. Jacobs, R.D.B. Whalley & D.J.B. Wheeler, *Grasses of New South Wales*, 4th edn (2008) (202), A. Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (196, Fig 27), 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. cold*. Growing at high altitudes.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 90–150 cm long, 5–6-noded. Culm-internodes antrorsely scabrous. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 1–3 mm long, scaberulous on abaxial surface, erose or lacerate, obtuse. Leaf-blades 10–20 cm long, 3–6 mm wide. Leaf-blade surface ribbed, scabrous, rough abaxially. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, 25 cm long. Primary panicle branches 2–4-nate, sparsely divided. Panicle axis with lower internodes 4–6 cm long. Panicle branches with occasional prickles. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–6 mm long, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both

fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.1–0.2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 3–3.5 mm long, 0.66 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 4.5–5.5 mm long, 1.1 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, light brown, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column, deciduous. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Rhachilla extension 0.6–1 mm long, pilose, with 0.3–1 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Tablelands.

Deyeuxia gunniana (Nees) Benth. *Fl. Austral.* 7: 584 (1878).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Ancistragrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Echinopogon gunnianus* Nees, *Hook. Lond. Journ. Bot.* 2: 413 (1843). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hampstead Hills, insulae Van Diemen Feb 1837, *Gunn 1011*.

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (479, Fig 93), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (202), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Ronald Campbell Gunn (1808–1881) South African-born Tasmanian botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 7–35 cm long, 2–3 -noded. Culm-internodes scaberulous. Ligule an eciliate membrane, 1 mm long, truncate or obtuse. Leaf-blades filiform, convolute, 2–15 cm long, 0.5–0.8 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate or oblong or pyramidal, dense, 2–9 cm long. Primary panicle branches spreading, 2–5 -nate. Panicle branches stiff. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.7–2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.2 length of lemma.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma, gaping. Lower glume ovate, 0.8–1.2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 0.8–1.2 mm long, 0.5–0.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 1.7–2 mm long, cartilaginous, keeled, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma lateral veins ribbed. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn subapical, straight, 0.5 mm long overall. Palea 1 length of lemma. Rhachilla extension 0.33–0.5 length of fertile floret, glabrous or pubescent.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Coast, Tablelands.

Deyeuxia hakonensis (Franch. & Sav.) Keng. *Sinensia* 11: 411 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Calamagrostis*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *Calamagrostis*).

TYPE from Japan. **Basionym or Replaced Name:** *Calamagrostis hakonensis* Franch. & Sav., *Enum. Pl. Jap.* 2: 599 (1879)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Japan, Hakone: Savatier 1470 (P holo, LE).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (186, Fig 65 as *Calamagrostis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 484).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Hakone, Sagami Province, Japan.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Cataphylls inconspicuous. Rhizomes short, knotty. Culms geniculately ascending, 30–60 cm long, 0.5–1 mm diam., 3–4 -noded. Culm-internodes 2–8 cm long. Leaves cauline. Leaf-sheaths smooth, glabrous on surface or puberulous, with reflexed hairs, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1–1.5 mm long, truncate or obtuse. Leaf-blades 7–30 cm long, 3–8 mm wide. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or ovate, 5–15 cm long, 1–1.5 cm wide. Primary panicle branches 2–5 -nate. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 3 mm long, 0.75–1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume lanceolate, 3.5–6 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3.5–6 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 3–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma apex entire or dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight, 2–4 mm long overall, without a column. Rhachilla extension 1–1.5 mm long, pilose, with 1.5–2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Russian far east, **China, Eastern Asia, Russia.** Sakhalin. China South Central, China North-Central, China Southeast. Japan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu.

TDWG4. Hebei. Anhui, Guangdong, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan.

Deyeuxia himalaica L. Liou. *Acta Phytotax. Sin.* 39(5): 447–449, f. 1 (2001).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), 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: Xizang: Madog, South Doshong La, in alpine meadow, 3900–4000 m, 14 Sept. 1974, *Qinghai Xizang Exped. 1033* (HT: PE) holotype here designated.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 474).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 20–60 cm long, 2–3 mm diam., 2(–4) -noded. Leaf-sheaths mostly shorter than adjacent culm internode, scaberulous, glabrous on surface. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades 9–20 cm long, 2–5 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 6–17 cm long, 3–6 cm wide. Primary panicle branches ascending, 3.5–8 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising (1–)2 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-

flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.5–1.5 mm long, pilose, with 1–1.5 mm long hairs. Floret callus pilose. Floret callus hairs 1–1.5 mm long, 0.25 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 5–6.5 mm long, 1.25 length of adjacent fertile lemma, membranous, purple, 1-keeled. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4 -fid, with lobes 0.2–0.8 mm long, awned, 1 -awned. Principal lemma awn dorsal, arising 0.6–0.8 way up back of lemma, curved, reflexed, 8–10 mm long overall. Palea keels scaberulous. Palea apex dentate, 2 -fid. Rhachilla extension 1 mm long, pilose, with 0.8–1 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2–2.5 mm long. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. Tibet.

Deyeuxia holciformis (Jaub. & Spach) Bor. *Grass. Burma, Ceylon, India & Pakistan* 398 (1960).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), 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) (as *Calamagrostis holciformis* & *C. compacta*).

TYPE from Tibet Autonomous Region. **Basionym or Replaced Name:** *Calamagrostis holciformis* Jaub. & Spach, *Ill. Pl. Orient.* 4: 61, pl. 340 (1851)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Tibet, Emodi: Jacquemont (P holo, K).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 492).

Derivation (Clifford & Bostock 2007): *L. forma*, appearance. Inflorescence a dense panicle as with *Holcus*..

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 10–40 cm long. Lateral branches lacking. Ligule an eciliate membrane, 2–3.5 mm long, truncate or obtuse. Leaf-blades filiform, flat or involute, 5–10 cm long, 1.5–2 mm wide, glaucous. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle smooth. Panicle contracted, ovate, continuous or interrupted, 1.5–6 cm long, 1–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33–0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4.5–6.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 4.5–5.5 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 6 mm long overall, 1.5 length of lemma, with twisted column. Palea 1 length of lemma, hyaline, 2 -veined. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. Middle Asia, China. Kirgizistan, Tadzhikistan. China North-Central, Qinghai, Tibet. **Indian Subcontinent.** Pakistan.

TDWG4. Gansu. Punjab. Himachal Pradesh, Jammu Kashmir.

Deyeuxia imbricata Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 55 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis imbricata* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Glen Innes: *Vickery* K36 (K holo, NSW).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (202), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (184).

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

Derivation (Clifford & Bostock 2007): *L. imbricare*, overlap like roof-tiles. The shorter branches bear densely overlapping spikelets.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 80–100 cm long, 3–4 -noded. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths scaberulous, glabrous on surface. Ligule an eciliate membrane, 3–6 mm long, erose, truncate. Leaf-blades 15–30 cm long, 2–4.5 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle spiciform, linear, continuous or interrupted, 7–14 cm long, 0.6–1.5 cm wide. Primary panicle branches appressed. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, terete, 0.3–1 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture. Lower glume lanceolate, 2–3.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2–3.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 1.8–3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 0.5–1 mm long overall, not or scarcely exerted from spikelet. Palea 0.75 length of lemma, hyaline, 2 -veined.

Flower and Fruit. Lodicules 2, lanceolate, membranous. Anthers 3, 0.7 mm long. Stigmas 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, Victoria.

TDWG4. South East. Coast, Tablelands.

Deyeuxia inaequalis Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 49 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis inaequalis* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Arnolds: *Carne* (K holo).

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (157, Pl. 47), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. in-*, not; *aequalis*, equal. The glumes differ in length.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 75 cm long. Leaf-sheaths striately veined, scaberulous, glabrous on surface. Ligule an eciliate membrane, 3–5 mm long, lacerate. Leaf-blades 1–5 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 1–6 cm long. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 2–2.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2.5 mm long, coriaceous, much thinner above, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3.5–4.5 mm long overall, with a straight or slightly twisted column. Palea 1 length of lemma.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia.

TDWG4. South-West.

Deyeuxia innominata D.I. Morris. *Muelleria*, 7(2): 164 (1990).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis innominata*. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Tasmania: Wurragurra Creek, 29 Jan 1983, A. Moscal 1569 (HT: HO-62754; IT: NSW).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (479 & 484, Fig 93 7 94), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (203), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): in-, not; nomen, name; -ata, possessing. The species was recognized but remained unnamed for many years.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely or moderately or densely. Culms 15–25(–60) cm long. Culm-internodes smooth. Leaf-sheaths ribbed. Ligule an eciliate membrane, 2–2.5 mm long, truncate. Leaf-blades straight or curved, involute, 4–8(–15) cm long, 1–3 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, smooth or scabrous, rough adaxially, glabrous or pilose, hairy abaxially.

Inflorescence. Inflorescence a panicle. Peduncle smooth or antrorsely scabrous above. Panicle contracted, linear or elliptic, 2–8 cm long. Primary panicle branches naked below or bearing spikelets almost to the base. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 2–3.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.25–3 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure or distinct. Lemma apex acute, mucicous or awned, 1 -awned. Principal lemma awn subapical, 0.5–1 mm long overall. Palea 2–2.5 mm long. Palea keels smooth. Rhachilla extension 1 mm long, villous, with 2–2.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 0.5–0.75 mm long. Stigmas 2. Caryopsis with adherent pericarp, ellipsoid, 1.5 mm long. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Tablelands.

Deyeuxia kokonorica (Keng ex Tzvelev) S.L. Lu. *Fl. Reipubl. Popularis Sin.* 9(3): 216 (1987).

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

TYPE from China. **Basionym or Replaced Name:** *Calamagrostis kokonorica* Keng ex Tzvelev, *Rast. Tsentr. Azii* 4: 84 (1968)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Keng, Fl. Ill. Sin. Gram. fig.447(1959).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 498).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Koko Nor, now Ching Hai Su, China.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 30–60 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades flat or convolute, 1.5–3.5 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, 3.5–8 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.25 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.5–4.5 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3.5–4.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 3.5–4.5 mm long overall, with twisted column. Palea 0.75 length of lemma. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China North-Central, Qinghai. Gansu.

Deyeuxia korotkyi (Litv.) S.M. Phillips & W.L. Chen. *Novon* 13(3): 321 (2003).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N. Tsvelev, *Grasses of the Soviet Union* (1983) (as *Calamagrostis*).

Basionym or Replaced Name: *Calamagrostis korotkyi* Litv., *Sched. Herb. Fl. Ross.* 55: , no. 2750 (1918). T: <Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: *H.F.R. Korotky 2750* (HT: LE).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 480).

Derivation (Clifford & Bostock 2007): in honor of M.F. Korotkij (-1915) Russian botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms 40–80 cm long. Lateral branches lacking. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane, 3–5 mm long, obtuse. Leaf-blades 5–10 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, interrupted, 3–15 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 7–9.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 2–2.5 mm long, 0.33–0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.4–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 5–5.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 8–11 mm long overall, with twisted column. Rhachilla extension 1–2 mm long, pilose, with 5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Siberia, Russian far east, **China, Mongolia.** Buryatiya, Irkutsk, Krasnoyarsk, Tuva, Magadan. Inner Mongolia, Manchuria, Xinjiang. Mongolia.

TDWG4. Nei Mongol. Heilongjiang.

Deyeuxia lacustris E. Edgar & H.E. Connor. *New Zealand J. Bot.*, 37(1): 68 (1999).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand: near Lake Tennyson, N. Canterbury, tarn margin, 3700 ft, Jan 1976, A.P. Druce s.n. (HT: CHR-313063; IT: NSW).

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

Derivation (Clifford & Bostock 2007): L. lacus, lake; -estre, place of growth. Growing in or around lakes.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, slender, 35–100 cm long. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane. Collar glabrous. Leaf-blades 2–4 mm wide, firm. Leaf-blade surface scabrous, rough on both sides.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 8–15 cm long, 1–2.5 cm wide. Primary panicle branches bearing spikelets almost to the base. Panicle axis scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded, hairy in 2 tufts. Floret callus hairs 0.5–0.66 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute. Upper glume lanceolate, 4–4.5 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface scabrous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1–0.25 way up back of lemma, geniculate, 3–3.5 mm long overall, clearly exerted from spikelet, with a straight or slightly twisted column. Rhachilla extension 1 mm long, villous, with 2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

TDWG4. South East. Coast, Tablelands.

Deyeuxia lawrencei Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 48 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis lawrencei* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 10 (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Tasmania: Lawrence 12 (K holo).

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 honor of Robert Williams Lawrence (1807–1833) plant collector in Tasmania.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, robust, 50–60 cm long, 3 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Ligule an eciliate membrane, 2–5 mm long, lacerate, obtuse. Leaf-blades flat or involute, 4–15 cm long, 1.5–4 mm wide. Leaf-blade surface scabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 9 cm long, 1 cm wide. Primary panicle branches appressed. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.1–0.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein

scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0–0.1 way up back of lemma, geniculate, 8–10 mm long overall, with twisted column. Palea keels scaberulous, adorned above.

Flower and Fruit. Lodicules 2. Anthers 3, 1.4 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Tasmania.

Deyeuxia macgregorii Jansen. *Acta Bot. Neerl.* 1(3): 470, f. 1 (1952).

TYPE from New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Papua: near the summit of Owen Stanley Range, 1889, *MacGregor s.n.* (HT: MEL).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 55–90 cm long. Ligule an eciliate membrane, 1.5–4 mm long. Leaf-blades involute, 17.5–30 cm long, 1–2 mm wide, stiff.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 11–17.5 cm long, 0.3–4.5 cm wide. Primary panicle branches 3–5 -nate, 4.5–7 cm long, bearing 5–32 fertile spikelets on each lower branch. Panicle axis smooth. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1.6–3 mm long, 0.25–0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 6 mm long, 1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 6 mm long, 1.2–1.5 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4–5.3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 6.25–9.5 mm long overall, with twisted column. Rhachilla extension 2.5–3.5 mm long, pilose or villous, with 1.25–2.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1.5–2.25 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. New Guinea PNG. New Guinea.

Deyeuxia macilenta (Griseb.) Keng. *Claves Gen. Sp. Gram. Prim. Sinic.* 204 (1957).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Calamagrostis*).

TYPE from Russia. **Basionym or Replaced Name:** *Calamagrostis varia* var. *macilenta* Griseb., *Fl. Ross.* 4(13): 427 (1852)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Russia, Altai: Ledebour (LE holotype).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 497).

Derivation (Clifford & Bostock 2007): L. thin. Culms slender.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms 15–40 cm long. Lateral branches lacking. Ligule an eciliate membrane, 0.5–5 mm long. Leaf-blades involute, 1–3 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear or oblong, continuous or interrupted, 3–7 cm long, 0.5–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33–0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 3–4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex awned, 1 -awned. Principal lemma awn dorsal, arising 0.25 way up back of lemma, geniculate, 4 mm long overall, with twisted column. Rhachilla extension 1.5–2 mm long, pilose, with 2–3 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Siberia, Russian far east, **China, Mongolia, Russia.** Buryatiya, Chita, Irkutsk, Tuva. Kamchatka. Inner Mongolia, Qinghai, Xinjiang. Mongolia.

TDWG4. Nei Mongol.

Deyeuxia mazzettii Veldkamp. *Gard. Bull. Singapore*, 37(2): 222 (1985).

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

Basionym or Replaced Name: *Calamagrostis stenophylla* Hand.-Mazz., *Symb. Sin. Pt. 7*: 1298 (1936).
T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: Longchu Shan, Huili, 3100–3400 m, 16 Sept. 1914, *Handel-Mazzetti 5173* (HT: W; IT: L).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 478).

Derivation (Clifford & Bostock 2007): In honor of Heinrich R.E. von Handel-Mazzetti (1882–1940) Austrian botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 20–25 cm long, 1 mm diam. Culm-internodes smooth. Lateral branches lacking. Leaf-sheaths papillose. Ligule an eciliate membrane, 3 mm long, 2 mm long on basal shoots, lacerate, truncate. Leaf-blades filiform, convolute, 10–20 cm long, 0.5 mm wide. Leaf-blade venation with 8 secondary veins. Leaf-blade margins scabrous. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 6–14 cm long. Primary panicle branches appressed, 3–8 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 1–1.5 mm long, 0.25 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4–5 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4–5 mm long, 1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex dentate, 2 -fid or 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 8–10 mm long overall, with twisted column. Palea 0.66 length of lemma, 2 -veined. Palea apex obtuse. Rhachilla extension 1.5 mm long, pilose.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. **China.** China South Central. **Malesia, Papuasiasia.** Philippines. New Guinea.

TDWG4. Sichuan, Yunnan.

Deyeuxia mckiei Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 72 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis mckiei* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Guyra: *McKie* 657 (K holo).

Recent Synonyms: *Calamagrostis mckiei* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (203).

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

Derivation (Clifford & Bostock 2007): in honor of Ernest Norman McKie (1882–1948) Australian cleric and amateur botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, robust, 60–120 cm long, 3–5 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaves cauline. Leaf-sheaths striately veined, scaberulous. Ligule an eciliate membrane, 2–4 mm long, scaberulous on abaxial surface, truncate or obtuse. Leaf-blades flat or involute, 5–30 cm long, 2–6 mm wide. Leaf-blade surface ribbed, scabrous, rough on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 20–40 cm long. Primary panicle branches 2–8 -nate, sparsely divided. Panicle axis with lower internodes 5–8 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 0.8–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent or pilose. Floret callus hairs 0.2–1.4 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma, parallel to lemmas. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex obtuse. Upper glume lanceolate, 0.8 length of adjacent fertile lemma, membranous, with scarios margins, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex obtuse.

Florets. Fertile lemma lanceolate, 3.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, 0.5 mm long overall. Palea keels scaberulous, adorned above. Rhachilla extension 1.3 mm long, pilose, with 0.5–1 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1–1.4 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales.

Deyeuxia mesathera Stapf ex Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 53 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis mesathera* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Sydney: *Cheel* (K holo).

Recent Synonyms: *Calamagrostis mesathera* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (203).

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

Derivation (Clifford & Bostock 2007): Gk. mesos, middle; ather, spike as of ear of wheat. The awn arises from the middle of the lemma.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 80–1120 cm long, 4–5 -noded. Culm-nodes glabrous. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, 2–4 mm long, scaberulous on abaxial surface, entire or erose, truncate. Leaf-blades flat or convolute, 8–45 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous or hispid, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, interrupted, 15–25 cm long, 1–2 cm wide. Primary panicle branches appressed. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface asperulous. Lemma apex dentate, 4 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 3.5–4 mm long overall, without a column. Palea 1 length of lemma. Palea keels scaberulous, adorned above.

Flower and Fruit. Lodicules 2. Anthers 3, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T.

TDWG4. Coast, Tablelands.

Deyeuxia microseta Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 66 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis microseta* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Blue Mts., Wentworth Falls: *Vickery* K33 (K holo, NSW).

Recent Synonyms: *Calamagrostis microseta* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (204).

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

Derivation (Clifford & Bostock 2007): Gk. mikros, small; L. seta, bristle. Lemma shortly awned.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths green or purple. Culms erect, slender, 40–60 cm long, 3–4 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 3–4 mm long, pubescent on abaxial surface, lacerate, obtuse. Leaf-blades 5–20 cm long, 1.5–3 mm wide. Leaf-blade surface scabrous. Leaf-blade margins scabrous. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, linear or elliptic, 3–10 cm long. Primary panicle branches appressed or ascending, 2–3 -nate, sparsely divided, 0.5–2 cm long. Panicle axis with lower internodes 1–2.5 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent or pilose. Floret callus hairs 0.5–1.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 3.5–4 mm long, 1.1 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3–3.5 mm long, membranous, without keel, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma surface scaberulous. Lemma apex truncate or acute, awned, 1 -awned. Principal lemma awn subapical, 0.5–1 mm long overall. Palea keels scaberulous, adorned above. Palea surface scaberulous. Rhachilla extension 0.7 mm long, pilose, with 1.5 mm long hairs.

Flower and Fruit. Lodicles 2. Anthers 3, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp, ellipsoid, 2 mm long. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T.

TDWG4. Coast, Tablelands.

Deyeuxia minor Benth. *Fl. Austral.* 7: 582 (1878).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis minor* (Benth.) J. M. Black, *Trans. Roy. Soc. S. Austral.* 43: 27. (1919). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Tasmania, Southport: *Stuart* (K lecto).

Recent Synonyms: *Calamagrostis minor* (Benth.) J. M. Black, *Trans. Roy. Soc. S. Austral.* 43: 27 (1919).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (212, Fig 159), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. smaller, lesser. Plants small in comparison with related species.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, slender, 8–45 cm long, 3-noded. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 1–2 mm long, erose, truncate. Leaf-blades flat or involute, 2–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 1–3.5 cm long, 0.5–0.9 cm wide. Primary panicle branches appressed. Panicle axis with lower internodes 0.4–0.8 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1-veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3 mm long, membranous, without keel, 5-veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4-fid, truncate, awned, 1-awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Palea keels scaberulous, adorned above.

Flower and Fruit. Lodicles 2. Anthers 3, 0.5–0.8 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. South Australia, A.C.T., Victoria, Tasmania.

TDWG4. Southern.

Deyeuxia monticola (Roem. & Schult.) Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 56 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Agrostis monticola* Roem. & Schult., *Syst.* 2: 359 (1817), based on *Vilfa montan* R.Br. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Tasmania, Table Mt.: Brown 6215 (BM holo, K).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 93), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (204), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (196, Fig 27), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

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

Derivation (Clifford & Bostock 2007): L. mons, mountain; -cola, dweller. Growing on mountains.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, 10–70 cm long, 2–3-noded. Leaves mostly basal. Leaf-sheaths antrorsely scabrous. Ligule a ciliolate membrane, 1–2 mm long,

scaberulous on abaxial surface, obtuse. Leaf-blades aciculate, involute, 5–20 cm long, 1–2 mm wide. Leaf-blade surface scabrous. Leaf-blade apex callose.

Inflorescence. Inflorescence a panicle. Peduncle retrorsely scabrous above. Panicle contracted, linear or lanceolate, continuous or interrupted, 5–15 cm long. Primary panicle branches appressed, 2–4 -nate, naked below or bearing spikelets almost to the base. Panicle axis with lower internodes 1–3 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1(–2) fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.8 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 1.2 length of adjacent fertile lemma, membranous, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins distinct. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33 way up back of lemma, geniculate, 6–8 mm long overall, with twisted column. Palea keels scaberulous, adorned above. Rhachilla extension glabrous or sparsely hairy.

Flower and Fruit. Lodicules 2. Anthers 3, 1.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Tablelands.

Deyeuxia moupinensis (Franch.) Pilg. *Bot. Jahrb. Syst.* 29(2): 225 (1901).

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

TYPE from China. **Basionym or Replaced Name:** *Calamagrostis moupinensis* Franch., *Nouv. Arch. Mus. Hist. Nat.*, ser. 2, 2(10): 106 (1888)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: grassy places in montane forests, 1300–2600 m.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 493).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short. Culms erect, 40–50 cm long, 2–3 mm diam., 3–4 -noded. Leaf-sheaths glabrous on surface or pubescent, with reflexed hairs. Ligule an eciliate membrane, 0.5 mm long, truncate. Leaf-blades flat or involute, 10–25 cm long, 2–6 mm wide. Leaf-blade surface scabrous, rough on both sides.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 8–14 cm long, 1.5–3 cm wide. Primary panicle branches 2–5 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 3 mm long, 1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume lanceolate, 3.5–4 mm long, 1 length of upper glume, membranous, light green or purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute. Upper glume lanceolate, 3.5–4 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, light green or purple, 1-keeled, 3 -veined. Upper glume surface scabrous. Upper glume apex acute.

Florets. Fertile lemma oblong, 3 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn subapical or from a sinus, curved, 5–6 mm long overall, clearly exerted from spikelet. Palea 0.66 length of lemma, hyaline. Rhachilla extension 0.5 mm long, villous, with 2–3 mm long hairs.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.2 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Sichuan.

Deyeuxia nepalensis Singh. *Taxon* 33:94 (1984).

More checking of status required.

Accepted by: 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).

TYPE from Nepal. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Nepal: south of Gurjakhani, 11500 ft, 17 Aug. 1954, *Stainton, Sykes & Williams* 3889 (HT: BM; IT: K).

Recent Synonyms: *Calamagrostis staintonii* Singh, *Taxon* 33:94 (1984).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 487).

Derivation (Clifford & Bostock 2007): in honor of John David Adam Stainton (1921-) English botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 30–60 cm long. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths striately veined, smooth, glabrous on surface. Ligule an eciliate membrane, 2.5 mm long, obtuse. Leaf-blades conduplicate, 15–25 cm long, 2–5 mm wide. Leaf-blade surface smooth or scabrous, glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle, without bracts or bracteate at branch bases. Panicle open, ovate, 18 cm long, 13 cm wide. Primary panicle branches 3–7-nate, 4–8 cm long. Panicle branches smooth, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, acuminate, 3.5–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume elliptic, 3.5–4.5 mm long, 1 length of upper glume, membranous, dark green and purple, 1-keeled, keeled above, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute or acuminate. Upper glume elliptic, 3.5–4.5 mm long, 1.4–1.6 length of adjacent fertile lemma, membranous, dark green and purple, 1-keeled, keeled above, 3 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile lemma elliptic or oblong, 2.5–2.75 mm long, hyaline, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, straight, 6–7 mm long overall. Palea hyaline, 2 -veined. Palea keels smooth.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long, purple. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** Nepal.

TDWG4. Sichuan, Yunnan. Uttah Pradesh.

Deyeuxia nivicola Hook. f. *Fl. Brit. India* 7(22): 267 (1897).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), N.L. Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from Sikkim. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Sikkim: Momay, 15,000 ft, *J.D. Hooker* (HT: ?).

Recent Synonyms: *Calamagrostis nivicola* (Hook.f.) Hand.-Mazz., *Symb. Sin. Pt. 7*: 1299 (1936).

Illustrations (Books): H.J. Noltie, *The Grasses of Bhutan* (2000) (as *Calamagrostis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 481).

Derivation (Clifford & Bostock 2007): L. nix, snow; -cola, dweller. Alpine species.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 8–20 cm long. Ligule an eciliate membrane, 1 mm long, truncate. Leaf-blades flat or convolute, 2–7 cm long, 0.5–1 mm wide. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 3–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6–7 mm long, breaking up at maturity,

disarticulating below each fertile floret. Floret callus pubescent or pilose. Floret callus hairs 0.5–1 mm long, 0.1–0.3 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 6–7 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 4.5–6.5 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 3.5 mm long, membranous, shiny, without keel, 5 -veined, more than 3-veined. Lemma lateral veins excurrent. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.05 way up back of lemma, geniculate, 6–7 mm long overall, with twisted column. Rhachilla extension 2.5–3 mm long, pilose.

Flower and Fruit. Lodicules 2. Anthers 3, 0.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

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

Country /Province /State. China. China South Central, Qinghai, Tibet. **Indian Subcontinent.** Eastern Himalaya, Nepal.

TDWG4. Sichuan, Yunnan. Bhutan, Sikkim. Uttah Pradesh.

Deyeuxia nudiflora Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 67 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis nudiflora* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Nowra district: *Rodway* (K holo).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (204).

Derivation (Clifford & Bostock 2007): callus glabrous.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms geniculately ascending, slender, 40–70 cm long, 6 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaf-sheaths striately veined, scaberulous. Ligule an eciliate membrane, 2–3 mm long, glabrous on abaxial surface, truncate. Leaf-blades flat or involute, 4–10 cm long, 1–2 mm wide. Leaf-blade surface ribbed, scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open or contracted, lanceolate, 5–10 cm long, bearing few spikelets. Primary panicle branches 1–2 -nate, sparsely divided. Panicle axis with lower internodes 1–2.5 cm long. Panicle branches with occasional prickles. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.2–1.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet or reaching apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex obtuse or acute. Upper glume lanceolate, 3–3.5 mm long, 0.95–1 length of adjacent fertile lemma, membranous, with scarious margins, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex truncate or obtuse.

Florets. Fertile lemma lanceolate, 3–3.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex entire or erose, truncate, muticous. Palea 1 length of lemma. Palea keels scaberulous, adorned above.

Flower and Fruit. Lodicules 2. Anthers 3, 1.5–2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T.

TDWG4. Coast, Tablelands.

Deyeuxia nyingchiensis P.C. Kuo & S.L. Lu. *Fl. Xizangica*, 5: 221–222, f. 113 (1987).

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

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Xizang: 3800–4000 m.,

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 477).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Nyingchi, Tibet Autonomous Region, China.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–80 cm long, 2–3 -noded. Lateral branches lacking. Leaf-sheaths smooth or antrorsely scabrous. Ligule an eciliate membrane, 4–5 mm long. Leaf-blades flat or involute, 10–15 cm long, 1–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 7–12 cm long, 5–8 cm wide. Primary panicle branches ascending or spreading, 3–6 -nate, whorled at most nodes, 2–8 cm long. Panicle branches arcuate, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, curved, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 5–7 mm long, 1.6–2 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66–0.75 way up back of lemma, straight, 4 mm long overall. Palea 0.66 length of lemma, hyaline, 2 -veined. Rhachilla extension 1–1.5 mm long, villous, with 3.5–4 mm long hairs.

Flower and Fruit. Anthers 3, 1 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, Tibet.

TDWG4. Sichuan.

Deyeuxia parviseta Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 71 (1940).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), D. Sharp, D. & B.K. Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis parviseta* (Vickery) Reeder, *Journ. Arn. Arb.* 31: 324, (1950). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Blue Mts., Blackheath: *Vickery* K29 (K hol., NSW).

Illustrations (Books): N. Walsh & T. Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94 as var. *boormanii*), S.W.L. Jacobs, R.D.B. Whalley & D.J.B. Wheeler., *Grasses of New South Wales*, 4th edn (2008) (205as var. *parviseta* & var. *boormanii*), A. Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28 as var. *boormanii*), D. Sharp & B.K. Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. parvus, small; seta, bristle. Lemma shortly-awned.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect or geniculately ascending, 60–120 cm long, 4 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaf-sheaths striately veined, scaberulous. Ligule an eciliate membrane, 1–4 mm long, scaberulous on abaxial surface, erose, truncate. Leaf-blades 10–25 cm long, 2–4 mm wide. Leaf-blade surface ribbed, scabrous, rough on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, 12–20 cm long. Primary panicle branches 2–6 -nate. Panicle axis with lower internodes 2.3–2.5 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 0.5–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, compressed slightly, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent or pilose. Floret callus hairs 0.3–1.2 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -

veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.9 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Fertile lemma lanceolate, 2.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn subapical, 0.5–1 mm long overall. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Rhachilla extension 0.7 mm long, pilose, with 1–1.4 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 0.8 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, Victoria.

TDWG4. South East. Coast, Tablelands.

Deyeuxia petelotii (Hitc.) S.M. Phillips & W.L. Chen. *Novon* 13(3): 319 (2003).

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

TYPE from Vietnam. **Basionym or Replaced Name:** *Aulacolepis petelotii* Hitc., *J. Wash. Acad. Sci.* 24(7): 291 (1934)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Vietnam: Tonkin: Fan Si Pan Shan, road near Chapu, ca. 1900 m, Aug. 1933, A. Pitelot 4743 (HT: US-1538646; IT: L, P) and US-1538648 ?.

Recent Synonyms: *Agrostis petelotii* (Hitc.) J. Sojak, *Cas. Nar. Muz. (Prague)*, 148(3–4): 202 (1980).

Illustrations (Books): H.J. Noltie, *The Grasses of Bhutan* (2000) (601, Fig. 25 as *Agrostis petelotii*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 475).

Derivation (Clifford & Bostock 2007): in honor of Paul Alfred Pitelot (1885-) French entomologist and plant collector in Indo-China.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 25–40 cm long, 3 -noded. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2 mm long, erose. Leaf-blades erect, 4–8 cm long, 1–3 mm wide. Leaf-blade surface scaberulous, rough on both sides.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, lanceolate, 6–10 cm long, with spikelets clustered towards branch tips. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent, obtuse.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2 mm long, 0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.5 mm long, cartilaginous, keeled, 5 -veined, more than 3-veined. Lemma apex acute, mucronate. Palea 0.75 length of lemma, 2 -veined. Palea keels approximate. Rhachilla extension glabrous.

Flower and Fruit. Anthers 3, 0.5 mm long.

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** Eastern Himalaya, India. Vietnam.

TDWG4. Guizhou, Yunnan. Bhutan.

Deyeuxia pulchella Hook.f. *Fl. Brit. India* 7(22): 268 (1897).

More checking of status required.

Accepted by: S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L. Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from Sikkim. **Basionym or Replaced Name:** *Calamagrostis pulchella* Griseb., *Nachr. Ges. Wiss. Göttingen, Math.-Phys. Kl.* 1868: 78 (1868)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sikkim: 3658–4878 m, *J.D. Hooker s.n.* (HT: ?; ST: L).

Recent Synonyms: *Calamagrostis pulchella* Griseb., non Reichb.(1830), *Goett. Nachr.* 78 (1868). *Calamagrostis megalantha* Keng ex P.C. Keng, *Bull. Bot. Res. North-East. Forest. Inst.*, 4(3): 194 (1984).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 473).

Derivation (Clifford & Bostock 2007): *L. pretty*. Attractive in some respect, usually the inflorescence.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 15–30 cm long. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades flat or involute, 13.5 cm long, 2.5–3 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, equilateral, 2.5–5 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4–4.5 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 4–5 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma oblong or ovate, 4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, 3 mm long overall. Palea 3 mm long, hyaline, 2 -veined. Rhachilla extension 1.5–2 mm long, pilose.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

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

Country /Province /State. **China.** China South Central, Tibet. **Indian Subcontinent.** Eastern Himalaya, India, Nepal, Pakistan.

TDWG4. Sichuan, Yunnan.

Deyeuxia pungens N.G. Walsh. *Muelleria*, 7(4): 452 (1992).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), 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, East Gippsland: Wakefield 2762 (MEL holo).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28).

Derivation (Clifford & Bostock 2007): *L. pungo*, prick. Leaf-blades sharp-pointed.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Ligule an eciliate membrane, 4–11 mm long, scarious, lacerate, acute. Leaf-blades erect, involute, 20–45 cm long, 1.5 mm wide, stiff. Leaf-blade surface ribbed, scabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, continuous or interrupted, 10–30 cm long, 0.5–2.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminate, muticous or mucronate. Upper glume lanceolate, 4–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acuminate, muticous or mucronate.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, much thinner above, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or asperulous. Lemma apex erose, truncate, muticous or mucronate

or awned, 1 -awned. Principal lemma awn subapical, 0.5 mm long overall. Rhachilla extension 0.3 mm long, glabrous or pilose, hairy at tip.

Flower and Fruit. Lodicules 2. Anthers 3, 2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Victoria.

Deyeuxia purpurea (Trin.) Kunth. *Revis. Gramin.* 1: 77 (1829).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), T.G.Tutin et al, *Flora Europaea* 5 (1980) (as *Calamagrostis*).

TYPE from Russia. **Basionym or Replaced Name:** *Arundo purpurea* Trin., *Neue Entdeck. Pflanzenk.* 2: 52 (1821)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Russia: in litt Baicalis, hb Gorenk, *Gorenke* (HT: LE).

Recent Synonyms: *Calamagrostis langsdorffii* (Link) Trin., *Gram. Unifl.* 225. t. 4. f. 10 (1824).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 485).

Derivation (Clifford & Bostock 2007): L. purple to reddish. Usually of purple spikelets.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes short or elongated. Culms erect, 20–200 cm long, 4–8 -noded. Lateral branches lacking or sparse. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 6–10 mm long. Leaf-blades flat or involute, 3–12 mm wide. Leaf-blade surface smooth or scaberulous, rough adaxially, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate or elliptic, dense or loose, nodding, 5–35 cm long. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1–1.1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute. Upper glume lanceolate, 2.5–8 mm long, 1.6–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume surface scabrous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 1.5–5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus or dorsal, arising 0.5–0.8 way up back of lemma, straight, 2–6.5 mm long overall, not or scarcely exerted from spikelet. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2. Anthers 3, indehiscent, yellow. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

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

Region. Northern Europe, Middle Europe, Southwestern Europe, Eastern Europe.

Country /Province /State. : Finland, Norway, Sweden. : Belgium, Czechoslovakia, Germany, Poland, Switzerland. : France. Baltic States, Central European Russia, North European Russia. Siberia, Russian far east, Middle Asia, Caucasus, China, Mongolia, Eastern Asia, Russia. Buryatiya, Irkutsk, Krasnoyarsk, Tuva. Kamchatka, Khabarovsk, Kuril Is, Magadan, Primorye, Sakhalin. China South Central, Inner Mongolia, Manchuria, China North-Central, Tibet, Xinjiang. Mongolia. Japan, Korea. Japan Hokkaido, or Honshu, or Shikoku. **Subarctic America.** Greenland.

TDWG4. Hebei, Shaanxi, Shanxi. Nei Mongol. Heilongjiang, or Jilin, or Liaoning. Hubei, Sichuan.

Deyeuxia quadriseta (Labill.) Benth. *Fl. Austral.* 7: 581 (1878).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Australia. **Basionym or Replaced Name:** *Avena quadriseta* Labill., *Nov. Holl. Pl.* 1: 25, t. 32 (1805). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Labillardiere s.n.*, Australia: Tasmania (FI; IT: P).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (213, Fig 160), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (157, Pl 47), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (479, Fig 93), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler,, *Grasses of New South Wales*, 4th edn (2008) (205), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (196 & 205, Fig 27 & 28), 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. quatuor, four; seta, bristle.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 15–120 cm long. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, 4–7 mm long, lacerate. Leaf-blades flat or involute, 2.5–7 mm wide. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, continuous or interrupted, 5–15 cm long. Panicle axis scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.5–1.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 2–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 5–6 mm long overall, with twisted column. Palea 0.8 length of lemma.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand. Western Australia, South Australia, New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I, Stewart Is.

TDWG4. South-West. Southern. Coast, Tablelands, Western Slopes, Western Plains.

Deyeuxia ramosa C.M.Weiller & N.G.Walsh. *Fl. Australia* 44A: 385 (2009).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Victoria, East Gippsland, Wingan Inlet, 13 Feb 1991, *J.E.Kemp s.n.*; holo:MEL; iso: NSW.

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms rambling, slender, 55–130 cm long, 5–10 -noded. Lateral branches ample, arising from upper culm. Leaves cauline. Leaf-sheaths smooth or scaberulous, glabrous on surface or puberulous. Ligule an eciliate membrane, 0.5–1 mm long, truncate. Leaf-blades flat or involute, 7–16 cm long, 1–3 mm wide. Leaf-blade surface smooth or scabrous, glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 20–95 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.3–2.2(–18) mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 2.5–3(–4) mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma elliptic, 2.5–3(–4) mm long, cartilaginous, without keel, 5–7 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma apex entire, acute or acuminate, awned, 1 -awned. Principal lemma awn subapical, straight, 0.5–0.6 mm long overall, not or scarcely exerted from spikelet. Rhachilla extension 1–1.4 mm long, pubescent, with 0.2–0.5 mm long hairs.

Flower and Fruit. Anthers 3, 1.1–1.5 mm long.

Distribution (TDWG). Continent. Australasia.
Country /Province /State. Australia. New South Wales, Victoria.
Coast.

Deyeuxia reflexa Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 69 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis reflexa* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Dorrigo Mt.: *Vickery* K31 (K holo, NSW).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (205).

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

Derivation (Clifford & Bostock 2007): L. bent sharply backwards. Panicle branches reflexed.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 120 cm long, 6 -noded. Culm-internodes scaberulous. Culm-nodes glabrous. Leaves cauline. Leaf-sheaths antrorsely scabrous, glabrous on surface to pubescent. Ligule an eciliate membrane, 2–3 mm long, pubescent on abaxial surface, lacerate, obtuse. Leaf-blades flat or involute, 15–30 cm long, 2–5 mm wide. Leaf-blade surface ribbed, scabrous, rough on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, effuse, equilateral or nodding, 20 cm long. Primary panicle branches 4–7 -nate. Panicle axis with lower internodes 3 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 0.5–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.8 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.66 length of upper glume, membranous, much thinner on margins, mid-green or purple, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 0.9 length of adjacent fertile lemma, membranous, with scarious margins, mid-green or purple, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma apex entire or dentate, 2 -fid, acute, awned, 1 -awned. Principal lemma awn subapical, curved, 2–2.5 mm long overall. Palea keels scaberulous, adorned above. Palea surface scaberulous. Palea apex undifferentiated or ciliate. Rhachilla extension 1.5 mm long, pilose, with 1–1.2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1.4–1.8 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales.

TDWG4. Coast.

Deyeuxia rodwayi Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 60 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis rodwayi* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 11 (1999). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, Mt. Wellington: *Rodway* 20 (K holo).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (479, Fig 93), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (206), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (196, Fig 27), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): in honor of Frederick Arthur Rodway (1853–1936) Australian physician and plant collector.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, slender, 15–40 cm long, 3-noded. Culm-nodes glabrous. Leaf-sheaths antrorsely scabrous, glabrous on surface. Ligule an eciliate membrane, 2–3 mm long, scaberulous on abaxial surface, lacerate, truncate. Leaf-blades 4–10 cm long, 1–3 mm wide. Leaf-blade surface puberulous or pubescent, hairy on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 4–11 cm long. Primary panicle branches appressed, 2–3-nate, bearing spikelets almost to the base. Panicle axis with lower internodes 1–2.5 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.8 mm long, 0.2 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 3.5–4.2 mm long, 1 length of adjacent fertile lemma, membranous, with scarious margins, 1-keeled, 1-veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3.5–4.2 mm long, coriaceous, without keel, 5-veined, more than 3-veined. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1-awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 2 mm long overall, with twisted column. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Rhachilla extension 1 mm long, glabrous.

Flower and Fruit. Lodicules 2. Anthers 3, 0.5 mm long. Stigmas 2. Caryopsis with adherent pericarp, oblong, 2 mm long. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. South East. Tablelands.

Deyeuxia rosea Bor. *Kew Bull.* 9(3): 498 (1954).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.L. Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Xizang: Lhasa, alpine meadows, grassy mountainsides, 3300 m, Sept. 1904, *H.J. Walton s.n.* (HT: K).

Recent Synonyms: *Calamagrostis borii* Tsvelev, *Akad. Nauk SSSR Bot. Inst. Komarova, Rast. Tsentral. Azii, Fasc.* 4, 8 (1968).

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

Derivation (Clifford & Bostock 2007): in honor of Norman Loftus Bor (1893–1972) Irish-born Indian forest botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms 20–35 cm long, 2–4-noded. Culm-internodes terete, smooth, distally glabrous. Lateral branches lacking. Leaf-sheaths striately veined, smooth, glabrous on surface. Ligule an eciliate membrane, 5–9 mm long. Leaf-blades ascending, 4–8 cm long, 4 mm wide, glaucous. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough on both sides. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, continuous or interrupted, 6–9 cm long, 1.7 cm wide. Panicle axis scaberulous. Panicle branches smooth or scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth or scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.33–0.5 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 4.5–5.5 mm long, 1.1 length of upper glume, membranous, purple, 1-keeled, 1-veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 4–5 mm long, 1 length of adjacent fertile lemma, membranous, purple, 1-keeled, 1-veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma elliptic, 4.5 mm long, 1.6–1.8 mm wide, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous. Lemma apex truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 4–5 mm long overall. Palea 3 mm long, 2 -veined. Rhachilla extension 2 mm long, pilose, with 2 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2–2.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central, Tibet.

TDWG4. Sichuan.

Deyeuxia scaberula Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 64 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis austrosaberula*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis benthamiana* (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 (1999). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia, Mt. Wellington: *R.C. Gunn 1462* (K holotype; iso: L).

Recent Synonyms: *Calamagrostis austrosaberula* R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 (1999). *Deyeuxia benthamiana* Vickery, *Contrib. N. S. Wales Nat. Herb.* 1: 63 (1940).

Calamagrostis benthamiana (Vickery) R. Govaerts, *World Checklist Seed Plants*, 3(1): 9 : (1999).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (206 and 200 as *D. benthamiana*), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. scaber*, rough; -ula, diminutive. Somewhat scabrous, usually referring to the lemma.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 60–90 cm long, 3–4 -noded. Culm-internodes antrorsely scabrous. Culm-nodes glabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–3 mm long, pubescent on abaxial surface, lacerate, truncate. Leaf-blades 6–15 cm long, 1.5–4 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous or pubescent, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, 12–25 cm long. Primary panicle branches 3–6 -nate. Panicle axis with lower internodes 4 cm long. Panicle branches capillary, scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–4 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.2–0.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 0.9 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume lanceolate, 3.5 mm long, 1.1 length of adjacent fertile lemma, membranous, with scarious margins, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3 mm long, membranous, light brown, without keel, 5 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma surface scaberulous. Lemma apex entire or dentate, 2 -fid, obtuse, awned, 1 -awned. Principal lemma awn subapical, straight, 0.5–1 mm long overall, without a column. Palea 1 length of lemma. Palea keels scaberulous, adorned above. Rhachilla extension 0.8 mm long, pubescent, with 0.2–0.5 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria, Tasmania.

TDWG4. Coast, Tablelands.

Deyeuxia scabrescens (Griseb.) Munro ex Duthie. *Himalayan Districts N.W. Prov. India* 628 (1882).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from Sikkim. **Basionym or Replaced Name:** *Calamagrostis scabrescens* Griseb., *Nachr. Ges. Wiss. Gottingen, Math.-Phys. Kl.* 3: 79 (1868)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sikkim: Lachen Valley, 3048–3658 m, *J.D. Hooker* (HT: ?; IT: L).

Recent Synonyms: *Calamagrostis sikangensis* (Keng) P.C. Kuo & S.L. Lu ex J.L. Yang.

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (611, Fig. 27 as *Calamagrostis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 477).

Derivation (Clifford & Bostock 2007): *L. scabresco*, becoming rough. Leaf-blades rough.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths herbaceous or coriaceous. Culms erect, 60–150 cm long. Lateral branches lacking. Ligule an eciliate membrane, 4–7 mm long, obtuse. Leaf-blades filiform or linear, flat or convolute, 20–45 cm long, 2.5–8 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle smooth or scaberulous above. Panicle open, lanceolate, dense or loose, nodding, 10–25 cm long. Primary panicle branches bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 4–6 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 4.5–6.5 mm long, 1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma apex dentate, 2 -fid, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 5–7 mm long overall, 1–1.5 length of lemma, with twisted column. Palea hyaline, 2 -veined. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. *N* = 14 (1 ref TROPICOS).

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

Country /Province /State. Western Asia, China. Iran. China South Central, China North-Central, Qinghai, Tibet. **Indian Subcontinent, Indo-China.** Eastern Himalaya, India, Nepal, Pakistan. Myanmar.

TDWG4. Gansu, Shaanxi. Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. Meghalaya, Nagaland. Uttah Pradesh, West Bengal. Himachal Pradesh, Jammu Kashmir.

Deyeuxia sichuanensis (J.L. Yang) Wen L. Chen. *Revis. Genus Deyeuxia (Poac.) China* 43 (2001).

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

TYPE from China. **Basionym or Replaced Name:** *Calamagrostis sichuanensis* J.L. Yang, *Acta Bot. Yunnan.* 5(1): 47–48, pl. 1 (1983)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: Wenchuan, Wolong, Tizgou, 2850 m ad margines sylvam, 7 July 1975, *J.L. Yang* 8221 (HT: SAC, SAU-TRI; IT: CDBI, PE) herb. Sichuan Agric. College, Chengdu Biol. Inst. Acad. Sin.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 491).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 33–50 cm long, 2–3 mm diam., 3–4 -noded. Leaf-sheaths longer than adjacent culm internode, smooth, glabrous on surface. Ligule an eciliate membrane, 3–4 mm long, scarious, truncate. Leaf-blades 11–25 cm long, 4–5 mm wide. Leaf-blade surface scaberulous, rough abaxially, glabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 11–22 cm long, 1–2 cm wide. Primary panicle branches 3–4 -nate, naked below or bearing spikelets almost to the base. Panicle branches flexuous, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both

fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 2.5–2.8 mm long, 1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 3.5–4 mm long, 1.1 length of upper glume, membranous, light green or purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface hirsute. Lower glume apex acute. Upper glume lanceolate, 3.2–3.8 mm long, 1.3 length of adjacent fertile lemma, membranous, light green or purple, 1-keeled. Upper glume surface hirsute. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.5–2.8 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 1.2 mm long overall, not or scarcely exerted from spikelet. Palea 2 mm long. Rhachilla extension 1.8 mm long, pilose, with 1.8 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 1 mm long. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Cleistogenes present, in lower sheaths.

Distribution (TDWG). Continent. Temperate Asia.

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

TDWG4. Gansu. Sichuan.

Deyeuxia sinelator Keng. *Fl. Tsinling*. 1(1): 441 (1976).

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

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China, Lushi: Liu 5182 (PE holo).

Recent Synonyms: *Calamagrostis sinelator* (Keng) P.C. Kuo & S.L. Lu ex J.L. Yang, *Fl. Sichuanica*, 5(2): 90 (1988).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 486).

Derivation (Clifford & Bostock 2007): *L. Sina*, China; *elator*, taller. From China, and resembling or separated from *Deyeuxia elator*.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 130–150 cm long, 3–5 mm diam., 3-noded, with 0.4–0.5 of their length below uppermost node. Lateral branches lacking. Ligule an eciliate membrane, 4–20 mm long, lacerate. Leaf-blades 9–45 cm long, 4–8 mm wide. Leaf-blade surface scabrous, rough abaxially, puberulous, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence a panicle. Peduncle 27–30 cm long, scaberulous above. Panicle open, ovate, 20–33 cm long, 6–15 cm wide. Primary panicle branches ascending or spreading, whorled at most nodes, 9 cm long. Panicle axis with lower internodes 2.5–5.5 cm long, scaberulous, glabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 3 mm long, 0.75–0.9 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4–5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acute. Upper glume lanceolate, 4–5 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume lateral veins distinct. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 3.5–4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex emarginate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, geniculate, 5 mm long overall, with twisted column. Palea 0.8–0.9 length of lemma, 2 -veined. Palea apex dentate, 2 -fid. Rhachilla extension 1 mm long, villous, with 4 mm long hairs.

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

Distribution (TDWG). Continent. Temperate Asia.

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

TDWG4. Shaanxi. Henan. Sichuan.

Deyeuxia smithii Veldkamp. *Alpine Fl. New Guinea* 2: 1142 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.M.B. Smith ANU 15487*, 10 Aug 1972, Papua New Guinea: New Guinea: Chimbu, Wilhelm Mt., [3542 m] (L).

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

Derivation (Clifford & Bostock 2007): In honor of Jeremy Michael Bayliss Smith (1945-) English born Australian ecologist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 30–60 cm long. Ligule an eciliate membrane, 2–2.5 mm long, obtuse. Leaf-blades erect, 15–35 cm long, stiff. Leaf-blade surface smooth, glabrous. Leaf-blade apex acute, pungent.

Inflorescence. Inflorescence a panicle. Peduncle smooth, glabrous. Panicle open, oblong, 12 cm long, 3.5 cm wide. Primary panicle branches ascending, 3-nate, 6.5 cm long, bearing 24 fertile spikelets on each lower branch. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse, disarticulating obliquely. Floret callus hairs 0.5–0.75 mm long, 0.1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 5.5 mm long, 1 length of upper glume, coriaceous, 1-keeled, 3-veined. Lower glume apex acute or acuminate. Upper glume lanceolate, 5.5 mm long, 1.2–1.5 length of adjacent fertile lemma, coriaceous, 1-keeled, 3-veined. Upper glume apex acute or acuminate.

Florets. Fertile lemma lanceolate, 3.75–4.25 mm long, chartaceous, without keel, 4-veined, more than 3-veined. Lemma surface scaberulous. Lemma apex dentate, 4-fid, awned, 1-awned. Principal lemma awn dorsal, arising 0.1 way up back of lemma, straight or flexuous, 2.25–3.5 mm long overall. Palea 3.5–4 mm long, 2-veined. Palea keels scabrous. Rhachilla extension 0.25–1 mm long, pubescent, with 0.5 mm long hairs.

Flower and Fruit. Anthers 3, 2.5 mm long, purple. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Papuaasia. New Guinea PNG. New Guinea.

Deyeuxia suizanensis (Hayata) Ohwi. *Journ. Jap. Bot.* 3: 211 (1958).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis filifolia*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from China. **Basionym or Replaced Name:** *Agrostis suizanensis* Hayata, *Icon. Pl. Formosan.* 7: 83–84, f. 50 (1918). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Taiwan: montane grasslands, ca. 3000 m, Dec. 1914, *T. Soma s.n.* (HT: TI).

Recent Synonyms: *Calamagrostis filifolia* (Wedd.) Pilger, non Merr.(1906), *Engl. Jahrb.* 42 : 67 (1908). *Deyeuxia biflora* Keng, *Sunyatsenia* 6(2): 90–92 (1941).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (274), C-C Hsu, *Taiwan Grasses* (1975), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 482).

Illustrations (Journals): *Darwiniana* (44(1) (2006)).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, 30–50 cm long, 0.8–1.5 mm diam., 1–2-noded. Culm-internodes smooth. Leaves mostly basal. Leaf-sheaths 2–5 cm long, smooth, glabrous on surface. Ligule an eciliate membrane, 0.7–3 mm long. Leaf-blades filiform, involute, 15–30 cm long, 2–3 mm wide, stiff. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle smooth or scaberulous above. Panicle contracted, linear or lanceolate, 6–20 cm long, 0.7–1.6 cm wide. Primary panicle branches appressed, 1–6 cm long, bearing spikelets almost to the base. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.8–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.33–0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4.8–5.5 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 4.8–6.5 mm long, 1.2–1.4 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled. Upper glume primary vein scabrous. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4–4.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma lateral veins extending close to apex. Lemma surface asperulous. Lemma apex entire, acuminate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.25–0.33 way up back of lemma, geniculate, 5–6 mm long overall, with twisted column. Rhachilla extension 1 mm long, pilose.

Flower and Fruit. Lodicules 2. Anthers 3, 1–1.2 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

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

Country /Province /State. **Eastern Asia.** Taiwan. **Malesia, Papuasias.** Philippines. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Western South America, Southern South America.** Bolivia, Peru. Argentina Northwest.

TDWG4. Jujuy.

Deyeuxia talariata N.G. Walsh. *Muelleria*, 7(3): 386 (1991).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia. **Basionym or Replaced Name:** *Calamagrostis talariata*. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia, East Gippsland: *Walsh* 801 (MEL holo).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (484, Fig 94), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (205, Fig 28), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. talaria*, robe reaching to the ankles; *-ata*, possessing. Lemma base encircled by long callus hairs.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 25–110 cm long. Leaf-sheaths smooth or scaberulous, glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane, 1.5–3 mm long, truncate. Leaf-blades conduplicate, 6–40 cm long, 1.5–3 mm wide, stiff. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence a panicle. Panicle spiciform, linear, continuous or interrupted, 4–11 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 3.6–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.66 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.6–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3.6–5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex muticous or mucronate or awned, 1 -awned. Principal lemma awn apical or subapical, 0.3–0.8 mm long overall. Palea 0.9 length of lemma. Rhachilla extension 1–1.5 mm long, villous.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. **Australia.** New South Wales, Victoria.

TDWG4. Tablelands.

Deyeuxia tianschanica (Rupr.) Bor. *Kew Bull.* 1949: 66 (1949).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Calamagrostis*).

TYPE from Russia. **Basionym or Replaced Name:** *Calamagrostis tianschanica* Rupr., *Sert. Tianschan*. 34 (1869)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Russia, Tianshan, Chatyrkel Lake: Osten-Saken (LE holo).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 492).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Tianshan, eastern Kazakhstan, former Soviet Union.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Rhizomes short. Culms erect, 10–50 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Ligule an eciliate membrane, 2–3 mm long, obtuse. Leaf-blades flat or involute, 2–3 mm wide. Leaf-blade surface scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Peduncle antrorsely scabrous above. Panicle spiciform, linear, interrupted, 1.5–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 2 mm long, 0.5–0.66 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 1 length of upper glume, membranous, purple, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3.5–6 mm long, 1–1.3 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 3.5–4.5 mm long, membranous, without keel. Lemma apex erose, awned, 1 -awned. Principal lemma awn dorsal, arising 0.33–0.5 way up back of lemma, geniculate, 4–5 mm long overall, with twisted column. Palea hyaline, 2 -veined. Rhachilla extension 2–2.5 mm long, villous, with 3–4 mm long hairs.

Flower and Fruit. Lodicules 2, lanceolate, membranous. Anthers 3, 1.5–2.5 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Middle Asia, China. Kirgizistan, Tadjikistan. China North-Central, Qinghai, Xinjiang.

TDWG4. Gansu.

Deyeuxia tibetica Bor. *Kew Bull.* 4(1): 66 (1949).

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

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (611, Fig. 27 as *Calamagrostis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 492 as *Deyeuxia tibetica* var. *tibetica* & *Deyeuxia tibetica* var. *przelvalskyi*).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Tibet Autonomous Region, China.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect or geniculately ascending, 10–20 cm long, 1 mm diam. Culm-internodes antrorsely scabrous. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2 mm long, scaberulous on abaxial surface, entire or lacerate, obtuse. Leaf-blades 3–6 cm long, 2–3 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle antrorsely scabrous above, glabrous or pubescent above. Panicle spiciform, linear or oblong or ovate, 1–2 cm long, 0.75–1.25 cm wide. Panicle branches pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 5 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface villous. Lower glume margins ciliate. Lower glume

apex acute. Upper glume elliptic, 1.2 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3 -veined. Upper glume surface villous. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Fertile lemma oblong, 4 mm long, membranous, purple, without keel, 5 -veined, more than 3-veined. Lemma apex dentate, 4 -fid, truncate, awned, 3 -awned. Principal lemma awn dorsal, arising 0–0.1 way up back of lemma, geniculate, 5.5 mm long overall, with twisted column. Lateral lemma awns present, 0.5 mm long. Palea keels scaberulous. Rhachilla extension 3 mm long, pilose, with 4 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3, 2.25 mm long. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

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

Country /Province /State. China. Qinghai, Tibet. **Indian Subcontinent.** Eastern Himalaya, India.

TDWG4. Sikkim.

Deyeuxia valida (Vickery) C.M.Weiller. *Fl. Australia* 44a: 385 (2009).

TYPE from Australia. **Basionym or Replaced Name:** *Deyeuxia monticola* var. *valida* Vickery, *Contrib. NSW Nat. Herb.* 1:57 (1940). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brindabella, A.C.T., 31 Dec 1933, *T.B.G.Osborn*; holo: NSW.

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms 60–100 cm long. Ligule an eciliate membrane. Leaf-blades erect, involute, 10–30 cm long, 4–8 mm wide, stiff. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, oblong or pyramidal, 10–20 cm long. Primary panicle branches 2–5 cm long. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 1.5–3.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 5.5–6.5 mm long, 1 length of upper glume, membranous, much thinner above, much thinner on margins, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 5.5–6.5 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, much thinner above, with hyaline margins, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 3.5–5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 5–10 mm long overall, with twisted column. Rhachilla extension 1–2 mm long, pilose, with 1.5–3 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. A.C.T.

Tablelands.

Deyeuxia yanyuanensis (J.L. Yang) L. Liou. *Vasc. Pl. Hengduan Mountains* 2: 2241 (1994).

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

TYPE from China. **Basionym or Replaced Name:** *Calamagrostis yanyuanensis* J.L. Yang, *Acta Bot. Yunnan.* 5(1): 48–49, pl. 2 (1983)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: Yanyuan, Meiyu, woodlands, 2600 m, in declivo montibus, 19 Oct. 1976, *Sichuan Exped. Veget. 12537* (HT: CDBI) herb. Chengdu Biol. Inst. Acad. Sin.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 476).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 40–60 cm long, 1 mm diam., 2–3 -noded. Leaf-sheaths mostly shorter than adjacent culm internode, antrorsely scabrous, glabrous on surface. Ligule an eciliate membrane, 3 mm long, membranous. Leaf-blades convolute, 5–9.5 cm long, 1.5 mm wide. Leaf-blade surface scaberulous, glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 6–11 cm long. Primary panicle branches 5–6 -nate, 2.5 cm long. Panicle branches capillary, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, smooth.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3–3.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pubescent. Floret callus hairs 0.5 mm long, 0.2 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acute. Upper glume lanceolate, 3–3.7 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume surface glabrous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.7–3.3 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma apex entire, emarginate, pungent, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight, 2–6.5 mm long overall. Palea 1.5–2 mm long, 2 -veined. Palea apex dentate, 4 -fid. Rhachilla extension 1.5–2.5 mm long, villous, with 2–3 mm long hairs.

Flower and Fruit. Lodicules 2. Anthers 3. Caryopsis with adherent pericarp, ovoid, 1.7 mm long. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Sichuan.

Deyeuxia youngii (Hook. f.) Buchanan. *Indig. Grass. N. Zeal.* 11 (1880).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Calamagrostis*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Agrostis youngii* Hook. f., *Handb. N. Zeal. Fl.* 330 (1864)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J. Haast s.n.*, 1862, New Zealand: Canterbury (K; IT: CHR-333354).

Recent Synonyms: *Calamagrostis youngii* (Hook.f.) Buchanan, *Indig. Grasses New Zealand : add. et corr.* (1880).

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

Derivation (Clifford & Bostock 2007): in honor of William Spearman Young (1842–1912) New Zealand surveyor.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms erect, 30–120 cm long, 3 -noded, with 0.5 of their length below uppermost node. Leaf-sheaths scaberulous. Ligule an eciliate membrane, obtuse. Leaf-blades 3–6 mm wide, flaccid. Leaf-blade surface smooth or scabrous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 6–15 cm long. Primary panicle branches 2–3 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, smooth.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose. Floret callus hairs 0.33 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 6 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 5 mm long, membranous, without keel, more than 3-veined. Lemma apex erose, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 1.5–2 mm long overall. Rhachilla extension 0.33 length of fertile floret, pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform. Disseminule comprising a floret.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Deyeuxia zangxiensis P.C. Kuo & S.L. Lu. *Fl. Xizangica* 5: 228, f. 119 (1987).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online (as *Calamagrostis*), 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: Xizang: alpine meadows, 4250 m.

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 495).

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Culms erect, 10–40 cm long. Lateral branches lacking. Ligule an eciliate membrane, 5–7 mm long, acuminate. Leaf-blades filiform, flat or involute, 5–10 cm long, 1.5–2 mm wide, glaucous. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle smooth. Panicle contracted, lanceolate, 1.5–6 cm long, 1–1.5 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.8–1 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, gaping. Lower glume lanceolate, 6–7 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume lanceolate, 6–7 mm long, 1.4–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume surface scabrous. Upper glume apex acuminate.

Florets. Fertile lemma oblong to ovate, 4 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex erose, truncate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, straight or curved, 4–5 mm long overall. Palea 1 length of lemma, hyaline, 2 -veined. Rhachilla extension pilose.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. Temperate Asia.

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

TDWG4. Gansu.

Deyeuxia zenkeri (Trin.) Veldkamp. *Gard. Bull. Singapore* 37(2): 219 (1984) [1985].

Accepted by: U. Quattrocchi, *CRC World Dictionary of Grasses* (2006), N.L. Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from India. **Basionym or Replaced Name:** *Calamagrostis zenkeri* (Trin.) G. Davidse, M.D. Dassanayake et al. (eds.), *Revised Handb. Fl. Ceylon*, 8: 107 (1994). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: India, Nilgiri Hills: *Schmid* (LE holo).

Illustrations (Books): H.J. Noltie, *The Grasses of Bhutan* (2000) (601, Fig. 25 as *Agrostis*).

Derivation (Clifford & Bostock 2007): in honor of Jonathan Karl Zenker (1799–1837) German botanist.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 30–60 cm long, wiry. Culm-internodes smooth or scaberulous. Culm-nodes glabrous. Leaf-sheaths scaberulous, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long, scaberulous on abaxial surface. Leaf-blades 6–11 cm long, 3–5 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 16–32 cm long, 5–10 cm wide. Primary panicle branches 3–4 -nate. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous, tip widened.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets, firmer than fertile lemma, shiny, gaping. Lower glume lanceolate, 2–2.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–2.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 2–2.5 mm long, chartaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma apex muticous. Palea 0.75 length of lemma, hyaline. Rhachilla extension pubescent, hairy at tip.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.75–0.8 mm long. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Eastern Himalaya.

TDWG4. Bhutan, Sikkim, Manipur, Meghalaya, Tamilnadu, West Bengal.

Diandrolyra bicolor Stapf. *Kew Bull.* 1906, 204 (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).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Sander 100–03*, Cultivated: Native country unknown. Raised at Kew from seeds communicated by Messers. Sander & Son. (K (photo, USJ)).

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, caespitose. Butt sheaths absent. Culms erect, 10–20 cm long. Leaves cauline, 5–8 per branch. Ligule absent. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–9 cm long, 10–15 mm wide, mid-green or purple, discolorous with last colour beneath (purple below). Leaf-blade venation with obscure cross veins. Leaf-blade apex acute. Monoecious, with male and female spikelets in the same inflorescence.

Inflorescence. Synflorescence on the same culm as leaves (rarely) or on a specialized culm bearing a single leaf-blade.

Inflorescence composed of racemes. Racemes 1, single, unilateral, 1.5 cm long, bearing few fertile spikelets, bearing 4–5 fertile spikelets on each. Rhachis flattened. Sexes mixed. Spikelets in pairs. Fertile spikelets pedicelled, 1 in the cluster. Male spikelets sessile, 1 in a cluster. Pedicels present, oblong, 1 mm long.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, dorsally compressed, 6 mm long, falling entire. Spikelet callus square, 0.5 mm long.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 6 mm long, 1 length of upper glume, herbaceous, without keels, 7 -veined. Lower glume lateral veins with cross-veins. Lower glume apex acuminate. Upper glume ovate, 6 mm long, 1.2 length of adjacent fertile lemma, herbaceous, without keels, 7 -veined. Upper glume lateral veins with cross-veins. Upper glume apex acuminate.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex acute. Palea 1 length of lemma, indurate, 2 -veined.

Flower and Fruit. Lodicules 3, fleshy, truncate. Anthers 2, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp, ellipsoid.

Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 5 mm long, glabrous. Male spikelet glumes absent. Male spikelet lemma 3 -veined, muticous.

Distribution (TDWG). Continent. South America.

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

Diandrolyra pygmaea Soderstr. & Zuloaga ex R.P.Oliveira & L.G.Clark. *Novon* 19(2): 211 (2009).

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Diandrolyra tatianae T.R. Soderstrom & F.O. Zuloaga. *Brittonia*, 37(1): 2 (1985).

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: *T.R. Soderstrom & T. Sendulsky 1993*, 16 May 1972, Brazil: Sco Paulo: Ubatuba Mun., -23.22 S Lat, -44.55 W Long., 15 m (SP; IT: L, NY-180138, US-2725487, US-2725486, US-2725485).

Illustrations (Books): E.J.Judziewicz et al, *American Bamboos* (1999) (271, Fig. 165).

Illustrations (Journals): *Brittonia* (37: 3, Fig.1 (1985)).

Derivation (Clifford & Bostock 2007): in honor of Tatiana Skvortzov Sendulsky (1922-) Russian but born in Harbin, Manchuria. Brazilian botanist.

Classification. Subfamily Bambusoideae. Tribe: Olyreae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths absent. Culms erect or geniculately ascending, 40–50 cm long. Culm-internodes thin-walled. Culm-nodes brown, pubescent. Leaves cauline, 4–6 per branch. Leaf-sheaths ribbed, glabrous on surface. Ligule an eciliate membrane, white. Leaf-blade base broadly rounded, symmetrical, with a brief petiole-like connection to sheath, petiole 0.2 cm long, petiole pubescent. Leaf-blades linear or elliptic, 10–16 cm long, 10–40 mm wide, mid-green or mid-green or purple, concolorous or discolorous with last colour beneath (purple below). Leaf-blade midrib evident. Leaf-blade surface glabrous. Leaf-blade margins smooth. Leaf-blade apex acute. 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. Peduncle pubescent above. Racemes 1, single, unilateral, 3 cm long, bearing few fertile spikelets, bearing 6–8 fertile spikelets on each. Rhachis flattened, glabrous on margins. Sexes mixed. Spikelets in pairs. Fertile spikelets pedicelled, 1 in the cluster. Male spikelets sessile, 1 in a cluster. Pedicels present, oblong.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, dorsally compressed, 6.1–6.2 mm long, 2–3 mm wide, falling entire. Spikelet callus square, 1 mm long, pubescent.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 5.4 mm long, 1 length of upper glume, herbaceous, without keels, 9 -veined. Lower glume lateral veins with cross-veins. Lower glume surface pubescent, hairy on veins. Lower glume apex acute. Upper glume ovate, 5.2 mm long, 1 length of adjacent fertile lemma, herbaceous, without keels, 7–9 -veined. Upper glume lateral veins with cross-veins. Upper glume surface pubescent, hairy on veins. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, 2 mm wide, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma margins flat. Lemma apex acute, scabrous. Palea 1 length of lemma, indurate, 2 -veined.

Flower and Fruit. Lodicules 3, free (male) or united (female), fleshy, truncate. Anthers 2, 1 mm long. Stigmas 2. Caryopsis with adherent pericarp, obovoid. Hilum linear, 0.75 length of caryopsis.

Male spikelets distinct from female, 1 flowered, separately deciduous, lanceolate, 5 mm long, glabrous. Male spikelet glumes absent (except terminal spikelet). Male spikelet lemma 3 -veined, mucous.

Distribution (TDWG). Continent. South America.

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

Diarrhena americana Beauv. *Agrost.* 142. t. 25. (1812).

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

TYPE from USA. **Basionym or Replaced Name:** *Festuca diandra* Michx. *Fl. Bor.-Amer.* 1: 67, pl. 10 (1803)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Michaux s.n.*, USA: Illinois (P-MICHX; IT: US-865785 (fragm. ex P-MICHX & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (66), F.W.Gould, *The Grasses of Texas* (1975) (69, Fig. 28).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From North or South America.

Classification. Subfamily Pooideae. Tribe: Diarrheneae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Culms erect, 50–120 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 25–50 cm long, 8–20 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 8–25 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 0.5 length of upper glume, cartilaginous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 0.66 length of adjacent fertile lemma, cartilaginous, 1-keeled, 3–5 -veined. Upper glume apex acute.

Florets. Fertile florets divergent, free at tip. Fertile lemma elliptic, 6–10 mm long, cartilaginous, much thinner on margins, without keel, rounded except near apex, 3 -veined, 0–3 -veined. Lemma lateral veins

convergent above. Lemma apex cuspidate, awned, 1 -awned. Principal lemma awn pungent, 0.5–1 mm long overall. Palea 2 -veined. Palea apex obtuse. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, membranous. Anthers 2–3. Caryopsis with tardily free pericarp, ellipsoid, exposed between gaping lemma and palea at maturity, apex umbonate.

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, Northeast USA, South-central USA, Southeastern USA. Missouri. Indiana, Ohio. Alabama, Arkansas, Georgia, Kentucky, Tennessee.

Diarrhena fauriei (Hack.) Ohwi. *Acta Phytotax. Geobot.* 10(2): 135 (1941).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Neomolinia*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Korea. **Basionym or Replaced Name:** *Molinia fauriei* Hack., *Bull. Herb. Boissier, ser. 2*, 3(6): 504 (1903)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Korea: in herbis secus rivos prope Nai-piang, *Faurie 804* (HT: W; IT: US).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 312).

Derivation (Clifford & Bostock 2007): in honor of Urbain Jean Faurie (1847–1914) French cleric and amateur botanist.

Classification. Subfamily Pooideae. Tribe: Diarrheneae.

Habit, Vegetative Morphology. Perennial, culms solitary. Cataphylls evident. Rhizomes short. Culms erect, 60–90 cm long, 1.8–3 mm diam., 5–7 -noded. Culm-internodes 5–14 cm long. Ligule an eciliate membrane, 0.5 mm long, entire or erose, truncate. Leaf-blades linear or lanceolate, 20–30 cm long, 7–20 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 12–16 cm long, 2–3 cm wide. Primary panicle branches appressed or ascending, 2–5 -nate, sparsely divided, (2–)3–10 cm long, bearing (2–)4–15 fertile spikelets on each lower branch. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising (1–)2 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets obovate, laterally compressed, 4–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 1–1.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2 mm long, 0.4–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets appressed to rachilla. Fertile lemma elliptic or ovate, 3.5–4.5 mm long, cartilaginous, without keel, rounded except near apex, 3 -veined, 0–3 -veined. Lemma surface smooth. Lemma apex acute. Palea 1 mm long, 2 -veined. Palea keels scabrous, adorned above.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 1.5–2 mm long. Caryopsis with tardily free pericarp, ellipsoid or obovoid, exposed between gaping lemma and palea at maturity, 2.5 mm long, apex umbonate.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Russian far east, **China, Eastern Asia.** Amur, Primorye. China North-Central. Japan, Korea. Japan Honshu.

TDWG4. Shandong.

Diarrhena japonica Franch. & Sav. *Enum. Pl. Jap.* 2: 603 (1879).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Japan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Japan: Koshiou Kaido tractu Niko. Detexit Dr. Rein., *Savatie 3075* nom. nud. *Onoea japonica* Franch & Sav. cited.

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (141, Fig 46), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 313).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to; Japan, a modified spelling Zhapan introduced into Europe by Marco Polo as a transliteration for the Chinese name for the large islands to the east of that country. From Japan.

Classification. Subfamily Pooideae. Tribe: Diarrheneae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Cataphylls evident. Rhizomes short, knotty. Culms erect or geniculately ascending, slender, 50–80 cm long, 1–1.5 mm diam., 4–5 -noded. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades lanceolate, 20–30 cm long, 8–15 mm wide. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, effuse, 10–20 cm long, 8–20 cm wide. Primary panicle branches spreading, 1–2 -nate, 2–7 cm long, bearing 1–6 fertile spikelets on each lower branch. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1.5–2.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1–3 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets obovate, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 0.8–1 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or ovate, 1.5–1.6 mm long, 0.3–0.4 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile florets appressed to rhachilla. Fertile lemma lanceolate or ovate, 3.5–5 mm long, cartilaginous, without keel, rounded except near apex, 3 -veined, 0–3 -veined. Lemma apex obtuse. Palea 1 mm long, 2 -veined. Palea keels smooth.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 0.7–1.2 mm long. Caryopsis with tardily free pericarp, ellipsoid or obovoid, exposed between gaping lemma and palea at maturity, 2.5–3.2 mm long, apex umbonate.

$2n = 38$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China, Eastern Asia. Manchuria. Japan, Korea. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu.

TDWG4.

Diarrhena mandshurica Maxim. *Bull. Acad. Petersb.* 2: 628 (1888).

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), N.Tsvelev, *Grasses of the Soviet Union* (1983) (as *Neomolinia*).

TYPE from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Russia, Amur, Chuela: Maximovicz (LE lecto, K).

Recent Synonyms: *Neomolinia mandshurica* (Maxim.) Honda, *Bot. Mag., Tokyo*, 46 2 (1932).

Illustrations (Books): N.N.Tsvelev, *Grasses of the Soviet Union* (1983) (787 (519), Pl.9 as *Neomolinia manshurica*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 314).

Derivation (Clifford & Bostock 2007): L. -icum, belonging to. From Manchuria.

Classification. Subfamily Pooideae. Tribe: Diarrheneae.

Habit, Vegetative Morphology. Perennial, culms solitary. Cataphylls evident. Rhizomes short. Culms erect, 60–120 cm long, 1.8–3 mm diam., 5–6 -noded. Culm-internodes 6–15 cm long. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1 mm long, entire or erose, truncate. Leaf-blades lanceolate, 13–30 cm long, 6–20 mm wide. Leaf-blade surface scaberulous, rough abaxially, pubescent, hairy adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 12–22 cm long, 1 cm wide. Primary panicle branches appressed, 2 -nate, simple, 3–7 cm long, bearing 2–7 fertile spikelets on each lower branch. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets obovate, laterally compressed, 4.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pubescent.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 1.5–2 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 2–3 mm long, 0.5–0.6 length of adjacent fertile lemma, membranous, 1-keeled, 1(–3) -veined. Upper glume lateral veins absent or obscure. Upper glume apex acute.

Florets. Fertile florets appressed to rhachilla. Fertile lemma lanceolate or ovate, 4.2–5 mm long, herbaceous, without keel, rounded except near apex, 3(–5) -veined, 0–3 -veined or more than 3-veined. Lemma lateral veins with distinct primaries but obscure intermediates. Lemma surface scabrous, rough on veins. Lemma apex obtuse. Palea 1 mm long, 2 -veined. Palea keels ciliate.

Flower and Fruit. Lodicules 2, membranous. Anthers 3. Caryopsis with tardily free pericarp, ellipsoid or obovoid, exposed between gaping lemma and palea at maturity, 4 mm long, dark brown, apex umbonate.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Russian far east, **China, Eastern Asia.** Primorye. Manchuria. Korea.
TDWG4.

Diarrhena obovata (Gleason) D.M. Brandenburg. *Bull. Torrey Bot. Club*, 118(2): 135 (1991).

Regarded by K as a synonym (*D. americana*).

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

TYPE from USA. **Basionym or Replaced Name:** *Diarrhena americana* var. *obovata* Gleason, *Phytologia* 4(1): 21 (1952)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *V.H. Chase 1539*, 4 Aug 1907, USA: Illinois, Stark Co. (MO (as 706), US-913264).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (66, as *D. obovata*).

Derivation (Clifford & Bostock 2007): *L. ob-*, contrary; *ovum*, egg; *-atum*, possessing. Spikelets egg-shaped with broad end distal to pedicel.

Classification. Subfamily Pooideae. Tribe: Diarrheneae.

Distribution (TDWG). Continent. North America.

Country /Province /State. **North-central USA, Northeast USA, South-central USA, Southeastern USA.** Iowa, Kansas, Missouri, Nebraska, Oklahoma, Wisconsin. Michigan, Ohio, New York. Texas. Arkansas, Kentucky, Tennessee.

Dichaetaria wightii Steud. *Syn. Pl. Gram.* 145 (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).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ind. or., *Hrbr. Wight 1035* Nees mpt.

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

Derivation (Clifford & Bostock 2007): in honor of Robert Wight (1796–1872) Scots-born physician and sometime Superintendent, Botanic Gardens, Madras.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 40–70 cm long. Leaves mostly basal. Ligule a ciliolate membrane. Leaf-blades 10–25 cm long, 1–6 mm wide. Leaf-blade midrib evident. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle. Panicle open, linear, effuse, 10–25 cm long. Primary panicle branches simple, bearing 1–6 fertile spikelets on each lower branch. 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 linear, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose.

Glumes. Glumes lower persistent, upper deciduous, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 5–7 mm long, 0.66 length of upper glume, 0.33–0.5 length of spikelet, membranous, 1-keeled, 3 -veined. Lower glume lateral veins ribbed. Lower glume apex acute. Upper glume lanceolate, 7–8 mm long, 0.5 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume lateral veins ribbed. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 12–15 mm long, coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface asperulous. Lemma apex dentate, 2 -fid, incised 0.2 of lemma length, setaceously acuminate, awned, 1 -awned. Principal lemma awn from a sinus, 10–15 mm long overall. Apical sterile florets 1 in number, barren, linear, 3–4 mm long. Apical sterile lemmas awned, 1 -awned. Apical sterile lemma awns 8–12 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. **Indian Subcontinent.** India, Sri Lanka. Tamilnadu.

Dichanthelium aciculare (Desvaux ex Poiret) F.W. Gould & C.A. Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1116 (1979).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum aciculare* Desv. ex Poir., *Encycl., Suppl.* 4: 274 Jul (1816)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Desvaux Herb. s.n.*, USA (P; IT: US-2808908 (fragm. & photo ex FI, P)).

Recent Synonyms: *Panicum bennettense* W. V. Brown, *Bull. Torr. Bot. Cl.* 49: 539 (1942). *Panicum pinetorum* Swallen, *Proc. Biol. Soc. Wash.* 55: 93 (1942).

Illustrations (Books): F.W.Gould, *The Grasses of Texas* (1975) (484, fig. 256 as *Dichanthelium angustifolium*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (281, Fig. 255 & 282, Fig. 256, 257, 258 & 259 as *P. fusiforme*, *P. angustifolium*, *P. arenicoloides*, *P. neuranthum*), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (12, Fig. 2 as *Dichanthelium angustifolium*).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths villous. Culms 30–75 cm long. Culm-internodes distally glabrous to pilose. Culm-nodes glabrous or pubescent. Lateral branches sparse or fastigiate. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface or pilose, outer margin glabrous or hairy. Leaf-sheath oral hairs lacking or ciliate. Ligule a fringe of hairs or absent, 0–1 mm long. Leaf-blades ascending, lanceolate, tapering towards tip, 6–15 cm long, 2–6 mm wide, 5–7 mm wide in winter rosette. Leaf-blade surface glabrous to pilose. Leaf-blade margins glabrous or ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 4–10 cm long, bearing few spikelets. Primary panicle branches spreading or reflexed. 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 or obovate, with acute base, dorsally compressed, compressed slightly, obtuse, 2–2.3 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, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, pubescent, with tubercle-based hairs, obtuse. Fertile lemma oblong, dorsally compressed, 2–2.8 mm long, 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. North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico. Missouri. New Jersey. Texas. Alabama, Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Virginia. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean, Northern South America, Western South America. Belize, El Salvador, Guatemala, Honduras, Nicaragua. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. Venezuela. Colombia.

Neuvo Leon, Tamaulipas. Veracruz. Oaxaca. Campeche, Chiapas, Tabasco.

Dichanthelium acuminatum (Swartz) F.W. Gould & C.A. Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1121 (1979).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), T.G.Tutin et al, *Flora Europaea* 5 (1980) (as *Panicum implicatum*).

TYPE from Jamaica. **Basionym or Replaced Name:** *Panicum acuminatum* Sw., *Prodr.* 23 (1788)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Swartz s.n.*, Jamaica (S; IT: BM, US-2808906 (fragm. & photo ex S, fragm. ex B-W, M, LE)).

Recent Synonyms: *Panicum huachucae* Ashe, *Journ. E. Mitchell Sci. Soc.* 15: 51 (1898). *Panicum implicatum* Scribn, *U.S. Dept. Agric. Bull. Agrost.* 11: 43. (1898).

Panicum languidum Hitchcock & Chase, *Contrib. U. S. Nat. Herb.* 15: 232 (1910).

Panicum lanuginosum Ell., *Sketch*, 1: 123 (1816).

Panicum benneri Fernald, *Rhodora*, 46: 2 (1944).

Panicum lindheimeri Nash, *Bull. Torr. Bot. Club*, 1897, 196. (1897).

Panicum scoparioides Ashe, *J. Elisha Mitchell Sci. Soc.* 15: 53 (1898).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (427 & 428 as subspecies. *acuminatum*, *columbianum*, *fasciculatum*, *implicatum*, *leucothrix*, *spretum*, *sericeum*, *lindheimeri*, *longiligulatum* & *thermale*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (287, Figs. 263, 264, 265, 288, Figs. 266 & 287, Figs. 267 & 268 as *P. leucothrix*, *P. wrightianum*, *P. longiligulatum*, *P. albmarlense*, *P. auburne*).

Derivation (Clifford & Bostock 2007): L. acumen, sharp point; -ata, possessing. Lemmas or glumes acute.

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

Habit, Vegetative Morphology. Perennial. Culms 15–40 cm long. Culm-internodes distally pubescent. Culm-nodes bearded. Lateral branches sparse or ample, arising from lower culm. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a fringe of hairs, 3–4 mm long. Leaf-blades 4–8 cm long, 5–12 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 3–9 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong or obovate, dorsally compressed, acute, 1.5–2 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, 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 surface pubescent. 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, 7–9 -veined, pubescent, obtuse. Palea of lower sterile floret 0.25 length of lemma. Fertile lemma ovate, dorsally compressed, 1.5–2 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Region. Southwestern Europe.

Country /Province /State. : France. **China.** China Southeast. **New Zealand.** New Zealand North I. **Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, Southeastern 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. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Arizona, California, Nevada, Utah. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. Colombia, Ecuador.

TDWG4. Jiangxi. Puebla. Coahuila, Chihuahua, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Guerrero, Oaxaca. Campeche, Chiapas, Tabasco.

Dichanthelium adenorhachis (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum adenorhachis* Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 78(1): 154–156, f. 2 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mori, King, dos Santos & Hage 12451a*, 21 Jul 1979, Brazil: Bahia: Mun. Rio de Contas, 6–10 km ao NW de Rio de Contas, na estrada para o Pico das Almas (CEPEC; IT: MO, US-2881257).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 155 Fig.2 (1991) as *Panicum*).

Derivation (Clifford & Bostock 2007): *Gk aden*, gland; *rhachis*, back-bone. The leaf-blades and panicles bear glands.

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

Habit, Vegetative Morphology. Perennial. Culms rambling. Culm-internodes terete, distally glabrous. Culm-nodes brown, glabrous or pubescent. Lateral branches sparse. Leaf-sheaths deciduous, glandular, striately veined, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.2–0.6 mm long. Collar pubescent. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 4–6 cm long, 3–5 mm wide, glandular (beneath). Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous, tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, effuse, 5–7 cm long, 4–5 cm wide, bearing few spikelets. Primary panicle branches spreading, 1-nate. Panicle branches glandular, scabrous, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, pubescent.

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, acuminate, 2.7–3 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.7–0.8 mm long, 0.25–0.33 length of spikelet, hyaline, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface hispidulous. 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, hispidulous, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.3 mm long, 0.8 mm wide, indurate, light brown, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute, mucronate. Palea embraced by lemma, involute, indurate.

Flower and Fruit. Caryopsis ellipsoid, 1.5 mm long, light brown. Embryo 0.4–0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Dichanthelium aequivaginatatum (Swallen) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum aequivaginatatum* Swallen, *Contr. U.S. Natl. Herb.* 29(6): 271 (1949)

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

Recent Synonyms: *Panicum thinophilum* Renvoize, *Kew Bull.*, 39(1): 180 (1984).

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

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

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

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 rhachilla extension. Spikelets 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. Rhachilla 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, Brazil. Guyana, Venezuela. Brazil Northeast, Brazil Southeast, Brazil South.

TDWG4.

Dichantherium assurgens (Renvoize) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum assurgens* Renvoize, *Kew Bull.* 37(2): 325, f. 3 (1982)

. T:<Type of Basionym>: *fide* 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): No illustration found (BKS).

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

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

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.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

TDWG4.

Dichantherium barbadense Salariao, Morrone & Zuloaga. *Syst. Bot.* 36 (1): 53 (2011).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bahia, Abaira, Pico do Barbado, 13°17'.04"S. 41°55'59.94W, 1,800–2430 m, 15 Aug 1998, *A.M.Giulietti, G.L.Campos, A.S.Conceição, A.T.Brito & R.P.Oliviera 1454* (holotype: HUEFS).

Illustrations (Journals): *Systematic Botany* (36 (1): 54, Fig.1 (2011)).

Classification. Tribe: Paniceae. Subtribe DICHANTHELIINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 15–40 cm long. Culm-internodes terete, thin-walled, 0.5–3 cm long, distally pubescent. Culm-nodes pubescent. Lateral branches ample, arising from mid culm and upper culm. Leaf-sheaths 1.2–3 cm long, longer than adjacent culm internode,

striately veined, glabrous on surface or pilose, outer margin hairy. Ligule a ciliate membrane, 0.2–0.4 mm long. Collar concolorous, pilose. Leaf-blade base broadly rounded. Leaf-blades lanceolate or ovate, 1–3 cm long, 4–5 mm wide. Leaf-blade surface hispid, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous, tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle 2–3 cm long, glabrous or pubescent above. Panicle open, ovate, 3–5 cm long, 1–2 cm wide, bearing few spikelets. Primary panicle branches appressed or ascending, 0.5–0.8 cm long, bearing 1–2 fertile spikelets on each lower branch. Panicle branches pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 2–5 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, acute, 3–3.2 mm long, 1.2–1.4 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 1.2–1.6 mm long, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume elliptic, 3–3.2 mm long, 1 length of spikelet, membranous, without keels, 9–11 -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, 3–3.2 mm long, 1 length of spikelet, membranous, 9 -veined, glabrous or pilose. Palea of lower sterile floret 2.4–2.6 mm long, 0.8 length of lemma, pilose, adorned on flanks. Fertile lemma elliptic, dorsally compressed, 2.4 mm long, 1.2 mm wide, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate, pubescent. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.4 mm long, truncate. Anthers 3.

Distribution (TDWG). Continent. South America.

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

Dichantherium boreale (Nash) R.W. Freckman. *Phytologia*, 39(4): 269 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum boreale* Nash, *Bull. Torrey Bot. Club* 22(10): 421–422 (1895)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *G.V. Nash s.n.*, 28 Jun 1893, USA: New York: Greene Co.: near Cairo (US-2808866).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (437).

Derivation (Clifford & Bostock 2007): L. of the north. Growing in the cold regions of the northern hemisphere.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–65 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.5 mm long. Leaf-blade base broadly rounded. Leaf-blades erect or ascending, 6–12 cm long, 6–14 mm wide. Leaf-blade surface glabrous. Leaf-blade margins glabrous or ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 5–10 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 elliptic, dorsally compressed, subacute, 2–2.1 mm long, 1 mm wide, 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 acute. Upper glume ovate, 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, ovate, 1 length of spikelet, membranous, 7 -veined, glabrous or pubescent, acute. Fertile lemma elliptic, dorsally compressed, 1.9 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 0.8–1 mm long.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada, North-central USA, Northeast USA. Quebec. Illinois, Iowa, Minnesota, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia.

Dichanthelium boscii (Poiret) F.W. Gould & C.A. Clark. *Ann. Missouri Bot. Gard.*, 65(4) 1101 (1979).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum boscii* Poir., *Encycl.* 4: 278 (1816)

. 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): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (413).

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

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

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

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, Northeast USA, South-central USA, Southeastern USA. Kansas, Missouri, Oklahoma. Indiana, Massachusetts, Ohio, Pennsylvania. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.

Dichanthelium cabreræ (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum cabreræ* Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 78(1): 156–158, f. 3 (1991)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Bahia: Mun. Rio de Contas: Pico das Almas, a 18 km ao SNW de Rio de Contas, 13:33'S, 41:57'W, 1600–1850 m, 22 Jul 1979, S.A. Mori, R.M. King, T.S. dos Santos & J.L. Hage 12475 (HT: CEPEC; IT: MO, US).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 157, Fig.3 (1991) as *Panicum*).

Derivation (Clifford & Bostock 2007): in honor of Angel Lulio Cabrera (1908–), Argentine botanist.

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

Habit, Vegetative Morphology. Perennial. Culms 50 cm long. Culm-internodes distally pubescent. Lateral branches sparse. Leaf-sheaths 1.5–2 cm long, striately veined, hispid, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane, 0.2 mm long. Collar pubescent. Leaf-blades deciduous at the ligule, linear or lanceolate, 4–6 cm long, 2 mm wide. Leaf-blade surface scabrous, rough on both sides, pilose, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle 5–7 cm long, hirsute above. Panicle open, ovate, effuse, 4.5–6 cm long, 3.5–6 cm wide. Primary panicle branches reflexed. Panicle axis hispid. Panicle branches hispid, glabrous in axils or pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 2–9 mm long, smooth, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, plano-convex, 2–2.3 mm long, 0.8–0.9 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.1–1.3 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface villous. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface villous. 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, villous, acute. Palea of lower sterile floret 0.75 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.9 mm long, 0.7 mm wide, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2 mm long. Caryopsis with adherent pericarp, obovoid. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast.

Dichanthelium caparoense (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum caparaoense* Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 80(1): 153, f. 36 (1993)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Brazil: Espirito Santo: Mun. Muniz Freire: Rodovia BR-262, 1000 m, 21 Jul 1982, *Hatschbach & Guimaraes 45170* (HT: K; IT: MBM).

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

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

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

Habit, Vegetative Morphology. Perennial. Culm-nodes constricted, black, glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.8 mm long. Collar pubescent. Leaf-blades lanceolate, 14–21 cm long, 10 mm wide, purple. Leaf-blade surface pubescent, sparsely hairy, hairy adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle 22 cm long, glabrous. Panicle open, ovate, 23 cm long, 20 cm wide. Panicle axis glabrous. Panicle branches smooth, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 5.9–6.5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 4.1 mm long, 0.66 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 13–15 -veined. Upper glume surface asperulous, rough above. 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, 13–15 -veined, scaberulous, rough above, acute. Palea of lower sterile floret 0.8–1 length of lemma, pilose, adorned on flanks. Fertile lemma elliptic, dorsally compressed, 5.2 mm long, 1.6 mm wide, indurate, shiny, without keel, 9 -veined, more than 3-veined. Lemma surface smooth. Lemma margins involute, ciliate, hairy above. Lemma apex acute, with a little green crest. Palea involute, indurate.

Flower and Fruit. Anthers 3 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium clandestinum (L.) Gould. *Brittonia*, 26(1): 59 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum clandestinum* L., *Sp. Pl.* 1: 58 (1753)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Kalm s.n.*, North America (LINN). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 118 (1908).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (420).

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

Derivation (Clifford & Bostock 2007): L. hidden. The inflorescence is enclosed or partially enclosed in the upper leaf-sheath.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 40–100 cm long. Culm-internodes antrorsely scabrous, distally pubescent to hispid. Culm-nodes glabrous or pubescent. Lateral branches fastigiate. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths hispid, with tubercle-based hairs. Ligule a fringe of hairs or absent, 0–1 mm long. Collar pubescent. Leaf-blade base cordate. Leaf-blades spreading or reflexed, lanceolate, 10–28 cm long, 10–30 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, elliptic, 9–16 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 elliptic, with obtuse base, dorsally compressed, subacute, 2.7–3.1 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 obtuse. Upper glume oblong, 1 length of spikelet, membranous, without keels, 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, dorsally compressed, 2.7–3.1 mm long, indurate, 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. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA. Quebec. Illinois, Iowa, Missouri, Oklahoma. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Texas.

Dichanthelium commutatum (Schult.) Gould. *Brittonia*, 26(1): 59 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum commutatum* Schult., *Mant.* 2: 242 (1824)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Elliott Herb. s.n.*, USA: Carolina et Georgia (CHARL; ILT: US-80874 (fragm. ex CHARL & photo)). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: ? (1910).

Recent Synonyms: *Panicum divergens* Kunth, *Nov. Gen. et Sp.* 1: 102 (1815). *Panicum hintonii* Swallen, *Contrib. U. S. Nat. Herb.* 49: 419 (1950).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (415 as subspecies. *commutatum* & *joori* & *ashei* & *equilaterale*), F.W.Gould, *The Grasses of Texas* (1975) (496, Fig. 262).

Derivation (Clifford & Bostock 2007): L. commuto, change. Of species that in the opinion of the proposer may be confused with another.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms erect or geniculately ascending, 40–75 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches fastigiate, arising from mid culm. 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, 0–1 mm long. Leaf-blade base cordate, symmetrical. Leaf-blades lanceolate, 6–9 cm long, 9–25 mm wide, flaccid. Leaf-blade surface glabrous. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 6–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, with obtuse base, dorsally compressed, subacute, 2.4–3.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1 mm long, 0.25–0.33 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, 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, dorsally compressed, 2.4–3.3 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 18$ (1 ref TROPICOS).

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

Country /Province /State. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico. Illinois, Missouri. Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, West Virginia. 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), Southwest Mexico, Southeast Mexico. Mesoamerica, Caribbean. El Salvador, Guatemala, Honduras, Nicaragua. Cuba, Haiti.

Mexico State, Morelos. Hidalgo, Queretaro. Veracruz. Jalisco, Michoacan, Oaxaca. Chiapas.

Dichanthelium congestum (Renvoize) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum congestum* Renvoize, *Kew Bull.* 37(2): 329, f. 6A-B (1982)

. 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): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): branches crowded in inflorescence.

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

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.

TDWG4.

Dichantheium consanguineum (Kunth) F.W. Gould & C.A.Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1115 (1979).

Regarded by K as a synonym (*D. ovale*).

TYPE from USA. **Basionym or Replaced Name:** *Panicum villosum* Elliott, *Sketch Bot. S. Carolina* 1(2): 124 (1816) ; *Panicum consanguineum* Kunth, *Revis. Gramin.* 1: 36 (1829)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Elliott s.n.*, USA (CHARL; IT: US-2808954 (fragm. ex CHARL & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (445).

Derivation (Clifford & Bostock 2007): L. *con*, with; *sanguineus*, blood-red. Spikelets or inflorescence branches reddish.

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

Distribution (TDWG). Continent. North America.

Dichantheium cucaense (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (2003).

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

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum cucaense* Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 78(1): 158, 160–161, f. 5 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Rio de Janeiro: Mun. Petropolis: Morro do Cuca, entre Vale dos Videiras e Araras, campo de altitude, 1600 m, 27 Jan 1983, G. Martinelli & E. Simonis 9011 (HT: RB; IT: MO, SI).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 160, Fig.5 (1991) as *Panicum cucaense*).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations flabellate. Culms erect or geniculately ascending, 20–30 cm long, without nodal roots or rooting from lower nodes. Culm-internodes 1–4 cm long. Culm-nodes constricted, brown. Lateral branches ample. Leaf-sheaths 1.2 cm long, hirsute, outer margin hairy. Ligule a ciliate membrane, 0.2 mm long. Leaf-blades conduplicate, 1.5–5.5 cm long, 1–2 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle 3–6 cm long, glabrous. Panicle open, ovate, 2–3.5 cm long, 1.5–3.5 cm wide, bearing few spikelets. Panicle axis glabrous. Panicle branches glabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–6 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 elliptic, dorsally compressed, 2.2–2.7 mm long, 0.8–0.9 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 1.5–1.9 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. 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 0.75 length of lemma.

Fertile lemma elliptic, dorsally compressed, 2.1–2.3 mm long, 0.7–0.8 mm wide, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate, scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.4 mm long, light brown. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium cumbucanum (Renvoize) Zuloaga. *Amer. J. Bot.* 90: 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum cumbucana* Renvoize, *Kew Bull.* 37(2): 332, 7C-D (1982)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *R.M. Harley, S.A. Renvoize, C.M. Erskine, C.A. Brighton & R. Pinheiro 15930*, 4 Feb 1974, Brazil: Bahia: by Rio Cumbuca, ca. 3 km S of Mucugi, near site of small dam on road to Cascavel, riverside, damp sandy soil, sandstone rocks and partly burnt-over vegetation, alt. ca. 850 m, 13:01'S, 41 }121'W (CEPEC-10042; IT: K, MO-3705073, NY, U, US-2955114).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (170, Fig. 62 as *Panicum cumbucana*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From River Cumbuca, Bahia, Brazil.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms decumbent, 15–35 cm long. Culm-internodes 1–2.8 cm long, distally hispid. Culm-nodes pubescent. Lateral branches ample, arising from upper culm. Leaf-sheaths 1–2 cm long, glabrous on surface or hispid, outer margin hairy. Ligule a ciliate membrane, 0.4–0.6 mm long. Collar pubescent. Leaf-blade base amplexicaul. Leaf-blades ascending, lanceolate, 1–3 cm long, 3–6 mm wide, stiff. Leaf-blade midrib conspicuous. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins scaberulous, ciliate, hairy at base. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, ovate, 1–2.5 cm long, 1–2 cm wide, bearing few spikelets. Panicle axis pubescent. Panicle branches eglandular, pubescent, pubescent in axils. 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, 1.9–2.4 mm long, 0.6–0.8 mm wide, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.3 mm long.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, not clasping, 1–1.3 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface glabrous or pubescent. Lower glume apex acute. Upper glume elliptic, 1.3–1.9 mm long, 0.66–0.75 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, glabrous or pubescent, acute. Palea of lower sterile floret 1.3–1.5 mm long, 0.75 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.5–1.8 mm long, 0.5–0.7 mm wide, indurate, pallid, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9 mm long, purple. Caryopsis with adherent pericarp, ellipsoid, 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 Northeast.

TDWG4. Bahia.

Dichanthelium cynodon (Reichardt) C.A. Clark & F.W.Gould. *Brittonia*, 30(1): 58 (1978).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Panicum*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010) (as *Panicum*).

TYPE from Hawaii. **Basionym or Replaced Name:** *Panicum cynodon* Reichardt, *Sitzungsber. Kaiserl. Akad. Wiss., Math.-Naturwiss. Cl., Abt. 1* 76: 724 (1878)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *Halemann 2129*, 1868–1871, Hawaii: Kauai I., Kauai Co. (US-80520 (fragm.)).

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1523, Pl. 224).

Derivation (Clifford & Bostock 2007): Gk. kyon, dog; odous, tooth. From chiendent the French name for the commonest species.

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

Habit, Vegetative Morphology. Perennial, mat forming or caespitose, clumped densely. Culms decumbent, 5–30 cm long. Lateral branches ample. Leaves distichous. Leaf-sheaths glabrous on surface or hispid. Ligule a ciliate membrane, 0.5–1 mm long. Leaf-blades spreading, linear or lanceolate, 1–5 cm long, 1–4 mm wide, stiff. Leaf-blade surface glabrous or puberulous. Leaf-blade margins glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, linear or lanceolate, 1–3 cm long, bearing few spikelets. Primary panicle branches appressed or ascending, simple. Panicle branches glabrous or pubescent 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 elliptic or oblong, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.33–0.66 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 -veined, acute. Palea of lower sterile floret 0.5 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.

Dichanthelium davidsei (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Venezuela. **Basionym or Replaced Name:** *Panicum davidsei* Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 78(1): 158, f. 4 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Davidse, M. Ramia & R. Montes 4796*, 3 Dec 1973, Venezuela: Bolmvar: Cabanayen, La Gran Sabana, wet inundated savanna, 1300 m (MO-2985992).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 159, Fig.4 (1991) as *Panicum davidsei*).

Derivation (Clifford & Bostock 2007): in honor of Gerrit Davidse (1942-) Netherlands-born United States botanist.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 150–320 cm long, rooting from lower nodes. Culm-internodes 8–23 cm long, distally hispid. Culm-nodes constricted, bearded. Lateral branches ample, arising from lower culm. Leaf-sheaths 5–8 cm long, hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.2 mm long. Collar pilose. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 9–13 cm long, 10–13 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, sparsely hairy, hairy abaxially. Leaf-blade margins glabrous or ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle 10–40 cm long. Panicle open, ovate, 12–20 cm long, 7–12 cm wide. Primary panicle branches whorled at lower nodes. Panicle branches flexuous, eglandular, glabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, flexuous, glabrous.

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, 3–3.3 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, 1.3–1.8 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume elliptic, 2.1–2.7 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 11–14 -veined. Upper glume surface asperulous. 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, 10–12 -veined, acute. Palea of lower sterile floret 2.1–2.4 mm long,

0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.4–2.7 mm long, 1 mm wide, indurate, without keel, winged on margins (at apex). Lemma surface papillose. Lemma margins involute. Lemma apex acute, with a little green crest or scabrous. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1.2 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.8 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Dichantherium depauperatum (Muhl.) Gould. *Brittonia*, 26(1): 59 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum depauperatum* Muhl., *Descr. Gram.* 112 (1817). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *H.C. Muhlenberg 170*, no date, USA: habitat in America borealis (PH; ILT: US-80662 (fragm. ex PH & photo, also fragm. ex B)). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15:151, 1910. They designated the left hand specimen on the sheet..

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (451).

Derivation (Clifford & Bostock 2007): L. reduced. Small compared with related species.

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

Habit, Vegetative Morphology. Perennial. Culms 25–50 cm long. Culm-internodes distally glabrous or pubescent. Lateral branches sparse. Leaves basal and cauline. Leaf-sheaths pubescent. Ligule a fringe of hairs, 0.3–1 mm long. Leaf-blades linear or lanceolate, flat or involute, 8–20 cm long, 1–4 mm wide. Leaf-blade surface glabrous or pilose or hispid, hairy abaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 4–8 cm long, bearing few spikelets. Primary panicle branches simple or sparsely 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, with obtuse base, dorsally compressed, acute, 3.3–4.5 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, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume oblong, 0.95–1 length of adjacent fertile lemma, 1 length of spikelet, membranous, without keels, 9 -veined. Upper glume lateral veins prominent. Upper glume surface glabrous to pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 0.95–1 length of fertile lemma, 1 length of spikelet, membranous, 7 -veined, prominently veined, glabrous to pubescent, acute. Fertile lemma oblong, dorsally compressed, 3.3–4.5 mm long, indurate, 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. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA. New Brunswick, Nova Scotia, Ontario, Prince Edward I, Quebec. Illinois, Iowa, Kansas, Minnesota, Missouri, Oklahoma, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Texas.

Dichantherium dichotomum (L.) Gould. *Brittonia*, 26(1): 59 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum dichotomum* L., *Sp. Pl.* 1: 58 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Clayton 458, one of the two plants*, USA: Virginia (LINN; IT: US-2808912 (fragm. ex BM & photo)). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 117 (1908).

Recent Synonyms: *Panicum concinnius* Hitchcock & Chase, *Contrib. U. S. Nat. Herb.* 15: 263 (1910).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (435 as subspecies. *dichotomum*, *yadkinense*, *lucidum*, *nitidum*, *roanokense*, *microcarpon* & *mattamuskeetense*), F.W.Gould, *The Grasses of Texas* (1975) (482, Fig. 255).

Derivation (Clifford & Bostock 2007): L. with divisions in pairs. Inflorescence branching dichotomously.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms slender, 20–80(–100) cm long. Culm-nodes glabrous or bearded. Lateral branches fastigiate. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane or a fringe of hairs, 0.2–1 mm long. Leaf-blades 4–12(–15) cm long, 3–10(–13) mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins glabrous or ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 3–8(–10) 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 rhachilla extension. 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, 1.5–2.4 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, 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 oblong, 0.7–0.8 length of spikelet, membranous, without keels, 7–9 -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, 7–9 -veined, glabrous or puberulous, obtuse. Fertile lemma oblong, dorsally compressed, 1.5–2.4 mm long, indurate, pallid, without keel, more than 3-veined. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

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

Country /Province /State. Eastern Canada, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico. New Brunswick. Oklahoma. Arizona, California. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Northeast Mexico, Gulf (Mexico), Pacific Is (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean.** Belize. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

TDWG4. Hidalgo, San Luis Potosi. Veracruz. Oaxaca. Chiapas.

Dichanthelium ensifolium (Ell.) Gould. *Brittonia*, 26(1): 59 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum ensifolium* Baldwin ex Elliott, *Sketch Bot. S. Carolina* 1(2): 126 (1816)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D.D. Baldwin s.n.*, no date, USA: Georgia (CHARL; IT: US-2808868 (fragm. ex CHARL & photo)).

Recent Synonyms: *Panicum breve* Hitchcock & Chase, *Contrib. U. S. Nat. Herb.* 15: 271 (1910).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (439 as *Dichanthelium chamaelonche*, as subspecies. *ensifolium* & *curtifolium*), F.W.Gould, *The Grasses of Texas* (1975) (485, Fig. 257), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (as *Panicum chamaelonche*).

Derivation (Clifford & Bostock 2007): L. ensis, sword; folium, leaf. Leaf-blades sword-like.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 20–45 cm long. Culm-internodes distally glabrous. Lateral branches sparse. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface. Ligule a fringe of hairs, 0.1–0.5 mm long. Leaf-blades lanceolate, 15–45 cm long, 1.5–4.5 mm wide, flaccid. Leaf-blade surface glabrous or puberulous, hairy abaxially.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 2–6 cm long, bearing few spikelets. Primary panicle branches 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 oblong or obovate, with obtuse base, dorsally compressed, compressed slightly, obtuse, 1.5–2 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 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 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 obovate, dorsally compressed, 1.8–2 mm long, 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. **Northeast USA, Southeastern USA, Mexico.** Alabama, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Virginia, District of Columbia. Northeast Mexico, Southeast Mexico. **Mesoamerica, Caribbean.** Belize. Cuba.

Hidalgo. Chiapas.

Dichanthelium erectifolium (Nash) F.W. Gould & C.A.Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1105 (1979).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum sphaerocarpon* var. *floridanum* Vasey, *Dept. Agric. Bot. Div. Bull.* 8: 33 (1889) ; *Panicum erectifolium* Nash, *Bull. Torrey Bot. Club* 23: 148 (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Curtiss* 3599, 5 May 1879, USA: Florida: Mosquito Inlet, moist pine barrens (US-81122; ILT: MO, US-823303). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 256 (1910).

Panicum erectifolium Nash, *Bull. Torr. Bot. Club*, 1896, 148. (1896).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (443), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (288, Fig. 271 as *Panicum*).

Derivation (Clifford & Bostock 2007): *L. erectus*, tending towards being erect; folium, leaf. With at least some leaf-blades erect.

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

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–70 cm long. Lateral branches sparse. Leaves mostly basal, heterophyllous with a basal winter rosette. Leaf-sheaths outer margin hairy. Ligule absent. Leaf-blade base cordate. Leaf-blades lanceolate, tapering towards tip, 7–13 cm long, 6–12 mm wide. Leaf-blade venation distinct. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, dense, 6–12 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 rhachilla extension. 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, with obtuse base, obtuse, 1–1.2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.15–0.25 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 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, puberulous, obtuse. Fertile lemma oblong or orbicular or obovate, dorsally compressed, 1–1.2 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. **Southeastern USA.** Florida, Georgia, Louisiana, North Carolina, South Carolina. **Caribbean.** Cuba.

Dichanthelium hebotes (Trin.) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum hebotes* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 3(1, 2–3): 301 (1834)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Anon.*, Brazil (LE-TRIN-0737.01; IT: US-974693 (fragm. ex LE)).

Panicum mirandum Luces, *J. Wash. Acad. Sci.* 32 (6): 163, f. 8 (1942).

Panicum subtiliracemosum Renvoize, *Kew Bulletin* 42: 922 (1987).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (734, Fig 154 as *Panicum*).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (80): 160, Fig.33 (1993) as *Panicum*).

Derivation (Clifford & Bostock 2007): Gk. hebos, youthful; -otes, denoting condition. Panicle branches with soft downy hair.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–90 cm long, rooting from lower nodes. Culm-internodes 3.5–15 cm long, distally hispid. Culm-nodes constricted, brown, pubescent. Leaf-sheaths 2.5–7.5 cm long, hispid, outer margin hairy. Ligule a ciliate membrane, 0.3 mm long. Collar pubescent. Leaf-blades lanceolate, 4.5–15 cm long, 7–23 mm wide. Leaf-blade surface hispid, hairy abaxially or on both sides. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle 12–32 cm long, hirsute above. Panicle open, ovate, 7–22 cm long, 4.5–11 cm wide. Panicle axis hispid. Panicle branches glandular, glabrous or pubescent. 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 elliptic, dorsally compressed, 1.5–1.9 mm long, 0.6–0.9 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 0.7–1.5 mm long, 0.2 length of spikelet or 0.75 length of spikelet (dimorphic), membranous, without keels, 3–7 -veined. Lower glume surface glabrous or puberulous. Lower glume apex obtuse or acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 9 -veined. Upper glume surface asperulous, rough above, glabrous or puberulous. 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, scaberulous, rough above, glabrous or puberulous, acute. Palea of lower sterile floret 0.7–1.2 mm long, 0.5–0.75 length of lemma. Fertile lemma elliptic, dorsally compressed, 1.3–1.7 mm long, 0.7–0.8 mm wide, indurate, pallid or dark brown or black, shiny, without keel. Lemma surface smooth. Lemma margins involute. Lemma apex acute, pubescent. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.7 mm long. Caryopsis with adherent pericarp, ellipsoid, 1 mm long, light brown. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Venezuela. Bolivia, Colombia, Ecuador. Brazil Northeast, Brazil Southeast, Brazil South.

Dichanthelium heliophilum (Chase ex Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum heliophilum* Chase ex Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 78(1): 152–154, f. 1 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Agnes Chase 9147*, 28 Mar–1 Apr 1925, Brazil: Minas Gerais: Chapeo de Sol, Serra do Cips, 110 km NE of Belo Horizonte, alt. 900 m, in dry rocks, leaning out, tangled with *Echinolaena inflexa* and resembling it, lower slope (US; IT: F, GH, MO-925222, NY).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78): 153, Fig.1 (1991) as *Panicum heliophilum*).

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Basal innovations flabellate. Culms scandent, 30–70 cm long. Culm-internodes distally pilose. Culm-nodes bearded. Lateral branches ample, arising from upper culm. Leaf-sheaths 0.5–1 cm long, pubescent, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a ciliate membrane, 0.2–0.3 mm long. Collar pubescent. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, flat or conduplicate, 4–5 cm long, 3 mm wide. Leaf-blade surface hirsute, densely hairy, hairy on both sides. Leaf-blade margins cartilaginous, scabrous, ciliate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle 4–8 cm long, hispid above. Panicle open, ovate, 4–16 cm long, 3–12 cm wide. Primary panicle branches not whorled or whorled at lower nodes.

Panicle axis pilose. Panicle branches glabrous or pubescent, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–13 mm long, smooth, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.6–3.1 mm long, 1–1.1 mm wide, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, not clasping, 2–2.7 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface villous. 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, villous, acute. Palea of lower sterile floret 2 mm long, 0.75 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.4–2.7 mm long, 0.8–0.9 mm wide, indurate, light brown, without keel, 5–7 -veined, more than 3-veined. Lemma surface papillose, pilose, hairy above. Lemma margins involute. Lemma apex acute. Palea involute, indurate. Palea surface pilose, hairy above.

Flower and Fruit. Anthers 3, 1.3 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.4 mm long, light brown. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium hillebrandianum (Hitchcock) C.A.Clark & F.W. Gould. *Brittonia*, 30(1): 57 (1978).

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

TYPE from Hawaii. **Basionym or Replaced Name:** *Panicum monticola* Hillebr., *Fl. Hawaiian Isl.* 501 (1888) ; *Panicum hillebrandianum* Hitchc., *Mem. Bernice Pauahi Bishop Mus.* 8(3): 197, f. 87 (1922)

. 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): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1527, Pl. 225).

Derivation (Clifford & Bostock 2007): L. -anum, indicating connection. In honor of Wilhelm Hillebrand (1821–86) German physician and botanist.

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

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, coriaceous. 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 rhachilla extension. 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.

Dichanthelium hirstii (Swallen) Kartesz. *Syn. N. Amer. Fl. (vers. 1.0)* item no. 5 (1999).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum hirstii* Swallen, *Rhodora* 63(752): 236 (1961). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Hirst* 47, 7 Jun 1959, USA: New Jersey (US-2306491).

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

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

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.

Dichanthelium isachnoides (Munro ex Hillebrand) C.A.Clark & F.W. Gould. *Brittonia*, 30(1): 57 (1978).

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

TYPE from Hawaii. **Basionym or Replaced Name:** *Panicum isachnoides* Munro ex Hillebrand, *Fl. Hawaiian Isl.* 501 (1888)

. 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): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1527, Pl. 225), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (as *Panicum*).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Isachne* with respect to spikelets.

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

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.

Dichanthelium itatiaiae (Swallen) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum itatiaiae* Swallen, *Phytologia* 14(2): 81 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Chase 8327, 18 Jan 1925, Brazil: Rio de Janeiro: Macieiras, Serra de Itatiaia (US-1255836; IT: US-1258426).

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

Derivation (Clifford & Bostock 2007): from Serra Itatiaia, Brazil.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 90–120 cm long, rooting from lower nodes. Culm-internodes 3–14 cm long, distally glabrous. Culm-nodes purple, glabrous. Lateral branches ample, arising from upper culm. Leaf-sheaths 3–8 cm long, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.3–0.4 mm long. Collar pubescent. Leaf-blade base broadly rounded. Leaf-blades lanceolate or oblong, 10–12 cm long, 10–14 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous, ciliate.

Inflorescence. Inflorescence a panicle. Peduncle 20–40 cm long, scaberulous above. Panicle open, ovate, effuse, 13–18 cm long, 10–20 cm wide. Panicle axis glabrous. Panicle branches scabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 3–8 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, 4.6–5 mm long, 1.6–1.7 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 2.6–3.2 mm long, 0.5–0.6 length of spikelet, membranous, without keels, 5 -veined. Lower glume apex acuminate. Upper glume elliptic, 4–4.3 mm long, 0.9 length of spikelet, membranous, without keels, (11–)13 -veined. Upper glume surface asperulous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, male, with palea. Lemma of lower sterile floret similar to upper glume, elliptic, 1 length of spikelet, membranous, 13 -veined, scaberulous, acute. Palea of lower sterile floret 1 length of lemma, pilose, adorned on flanks. Fertile lemma lanceolate, dorsally compressed, 4–4.2 mm long, 1.3–1.6 mm wide, indurate, without keel, 7 -veined, more than 3-veined. Lemma surface scaberulous, rough above. Lemma margins involute. Lemma apex apiculate, pubescent. Palea involute, indurate. Palea surface scaberulous (above).

Flower and Fruit. Anthers 3, 2.2 mm long. Caryopsis with adherent pericarp, obovoid, 2.5 mm long. Embryo 0.2 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium koolauense (St. John & Hosaka) C.A. Clark & F.W. Gould. *Brittonia*, 30(1): 58 (1978).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum koolauense* H. St. John & Hosaka, *Occas. Pap. Bernice Pauahi Bishop Mus.* 11(13): 3, f. 1.; t. 1 (1935)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *St. John 10178*, USA: Hawaii (NY; IT: UC, US).

Illustrations (Books): W.L. Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1527, Pl. 225).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Koolau Range, Oahu one of the Hawaiian Islands.

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

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, scaberrulous, 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.

Dichantherium latifolium (L.) A.M. Harvill. *Castanea*, 42(2): 177 (1977).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum latifolium* L., *Sp. Pl.* 1: 58–59 (1753)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Kalm. s.n., left-hand specimen*, North America (LINN; ILT: US-2808928 (fragm. ex LINN & photo)). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 118 (1908).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (413).

Derivation (Clifford & Bostock 2007): L. *latus*, broad; *folium*, leaf. Leaf-blades broad or relatively broad with respect to related species.

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

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect, robust, 45–90 cm long. Culm-nodes glabrous. Lateral branches ample, arising from mid culm. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface or pubescent, outer margin hairy. Ligule a ciliate membrane, 0.1–0.5 mm long. Leaf-blade base cordate. Leaf-blades ascending or spreading, lanceolate, 8–15 cm long, 15–35 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins tuberculate-ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pubescent above. Panicle open, ovate, 7–15 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, 3.2–3.7 mm long, 1.8–2 mm wide, 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, 3 -veined. Lower glume surface pubescent. Lower glume apex obtuse or acute. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 9 -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, 9 -veined, pubescent, acute. Fertile lemma elliptic, dorsally compressed, 2.5–3.2 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 0.8–1 mm long.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada, North-central USA, Northeast USA, Southeastern USA. Ontario, Quebec. Illinois, Iowa, Minnesota, Missouri, Wisconsin. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. Arkansas.

Dichantherium laxiflorum (Lam.) Gould. *Brittonia*, 26:1099 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum laxiflorum* Lam., *Encycl.* 4: 748 (1798)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *ex Herb. Vaillant s.n.*, no date, USA: Virginia (P-LAM (photo)); IT: US-2808927 (fragm. ex P)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (448), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (279, Fig. 251 as *Panicum xalapense*).

Derivation (Clifford & Bostock 2007): *L. laxus*, loose; flos, flower. Inflorescence an open panicle.

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

Habit, Vegetative Morphology. Perennial, mat forming. Culms 15–40 cm long. Culm-internodes distally glabrous. Culm-nodes bearded. Lateral branches lacking. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface or hirsute, with simple hairs or reflexed hairs, outer margin hairy. Ligule an eciliate membrane or a ciliolate membrane. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 7–16 cm long, 3–10 mm wide, yellowish green. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, loose, 7–12 cm long, bearing few spikelets. Panicle axis hirsute. Panicle branches hirsute. 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 oblong or ovate, dorsally compressed, obtuse, 1.7–2.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.25–0.33 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.7–2.3 mm long, 1 length of spikelet, membranous, without keels, 5 -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, 1.7–2.3 mm long, 1 length of spikelet, membranous, 5 -veined, pubescent, obtuse. Fertile lemma elliptic, dorsally compressed, 1.5–2 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, South-central USA, Southeastern USA, Mexico. Illinois, Kansas, Missouri, Oklahoma. 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), Southwest Mexico, Southeast Mexico.

Mexico State, Puebla. Hidalgo, Neuvo Leon, Queretaro. Veracruz. Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Dichanthelium leibergii (Vasey) R.W. Freckman. *Phytologia*, 39(4): 271 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum scoparium* var. *leibergii* Vasey, *Dept. Agric. Bot. Div. Bull.* 8: 32 (1889)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.B. Leiberg* 34, 1878, USA: Iowa: Plymouth Co. (US-743701).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (417).

Derivation (Clifford & Bostock 2007): in honor of John Bernhard Leiberg (1853–1913), United States forester and plant collector.

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

Habit, Vegetative Morphology. Perennial. Culms erect, slender, 25–75 cm long. Culm-internodes antrorsely scabrous, distally glabrous or pilose. Lateral branches sparse. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths hispid, with tubercle-based hairs. Ligule absent. Leaf-blades erect or ascending, lanceolate, 6–15 cm long, 7–15 mm wide. Leaf-blade surface hispid, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 8–15 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 elliptic, dorsally compressed, 3.7–4 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, 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 hispid, with tubercle-based hairs. Lower glume apex acute. Upper glume oblong, 1 length of spikelet,

membranous, without keels, 7 -veined. Upper glume lateral veins prominent. Upper glume surface hispid, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7 -veined, prominently veined, hispid, with tubercle-based hairs, obtuse. Fertile lemma oblong, dorsally compressed, 3.7–4 mm long, indurate, 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. Western Canada, Eastern Canada, North-central USA, Northeast USA. Manitoba, Saskatchewan. Ontario. Illinois, Iowa, Minnesota, Missouri, North Dakota, Nebraska, South Dakota, Wisconsin. New York.

Dichanthelium linearifolium (Scribn.) Gould. *Brittonia*, 26(1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum linearifolium* Scribn., *Ill. Fl. N. U.S.* 3: 500, f. 268A (1898)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *G.R. Vasey s.n.*, 1882, USA: District of Columbia (US-2808888). Also see U.S.D.A. Div. Agrostol. Bull. 11:42. 1898..

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (451).

Derivation (Clifford & Bostock 2007): L. linea, linen thread; -aris, pertaining to; folium, leaf.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 25–50 cm long. Culm-internodes distally glabrous or pubescent. Lateral branches sparse. Leaves basal and cauline, all alike or heterophyllous with a basal winter rosette. Leaf-sheaths pilose. Ligule a fringe of hairs, 0.3–1 mm long. Leaf-blades linear or lanceolate, flat or involute, 8–20 cm long, 1–4 mm wide, 1–4 mm wide in winter rosette. Leaf-blade surface glabrous or pilose or hispid, hairy abaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 4–8 cm long, bearing few spikelets. Primary panicle branches simple or 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 elliptic, with obtuse base, dorsally compressed, obtuse, 2.2–3.2 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, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume oblong, 1.1–1.2 length of adjacent fertile lemma, 1 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, oblong, 1.1–1.15 length of fertile lemma, 1 length of spikelet, membranous, 7 -veined, pubescent, obtuse. Fertile lemma oblong, dorsally compressed, 2–2.8 mm long, indurate, 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. Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, South-central USA, Southeastern USA. New Brunswick, Newfoundland, Nova Scotia, Ontario, Quebec. Colorado. Illinois, South Dakota. Connecticut, Indiana, Maine, Massachusetts, Michigan, Ohio, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia. New Mexico, Texas. Arkansas, Georgia, North Carolina, South Carolina.

Dichanthelium macrospermum Gould. *Brittonia* 32: 358 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R.L. McGregor et al. 618*, 13 Jul 1963, Mexico: San Luis Potosi: 30 mi 3 of San Luis Potosi, along highway 86 to Rmo Verde (US-2454897).

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

Derivation (Clifford & Bostock 2007): Gk. makros, large; sperma, seed.

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

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect, 50–80 cm long, 4–6-noded. Leaf-sheaths hispid, outer margin hairy. Ligule a ciliolate 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. Southeastern USA, Mexico. Florida, Georgia, Louisiana, North Carolina, South Carolina. Northeast Mexico.

TDWG4. San Luis Potosi.

Dichantherium malacophyllum (Nash) Gould. *Brittonia*, 26(1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum malacophyllum* Nash, *Bull. Torrey Bot. Club* 24(4): 198 (1897)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *B.F. Bush* 1228, 19 May 1895, USA: Oklahoma: Creek Co.: Sapulpa (NY; IT: US-2808946 (fragm. ex NY & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (423).

Derivation (Clifford & Bostock 2007): Gk. malakos, soft to the touch; phyllon, leaf. Leaf-blades velvety-pilose.

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

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–70 cm long. Culm-internodes distally pilose. Culm-nodes bearded. Lateral branches fastigiata. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths pilose, with tubercle-based hairs or reflexed hairs. Ligule a fringe of hairs, 1–1.5 mm long. Leaf-blades lanceolate, 6–10 cm long, 5–12 mm wide. Leaf-blade surface pubescent. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 3–7 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 or obovate, with obtuse base, dorsally compressed, obtuse, 2.6–3.2 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 oblong, 1 length of spikelet, membranous, without keels, 7–9-veined. Upper glume lateral veins prominent. Upper glume surface pilose, with tubercle-based hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, 7–9-veined, prominently veined, pilose, with tubercle-based hairs, obtuse. Fertile lemma oblong or obovate, dorsally compressed, 2.6–3.2 mm long, indurate, 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. North-central USA, Northeast USA, South-central USA, Southeastern USA. Kansas, Missouri, Oklahoma. Ohio. Texas. Arkansas, South Carolina, Tennessee.

Dichanthelium nodatum (Hitchc. & Chase) Gould. *Brittonia*, 26 (1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum nodatum* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 15: 293, f. 331 (1910)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 3865, 7 Aug 1904, USA: Texas: Kenedy Co.: Sarita (US-592749).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (411), F.W.Gould, *The Grasses of Texas* (1975) (494, Fig. 260).

Derivation (Clifford & Bostock 2007): L. nodus, knot; -atum, possessing. Lateral culms with numerous swollen nodes.

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

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 or 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, Mexico. Texas. Northeast Mexico.

TDWG4. Coahuila.

Dichanthelium nudicaule (Vasey) B.F.Hansen, Wunderlin. *Novon* 11(3): 367 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum nudicaule* Vasey, *Dept. Agric. Bot. Div. Bull.* 8: 31 (1889)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: A.H. Curtiss 3583*, May 1886, USA: Florida: Santa Rosa Co. (US-2808984; ILT: US-742715, NY-7267, NY-381676, TAES). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 179 (1910).

ST: A. H. Curtiss 3583*, USA: Florida: Duval Co.: NE Florida (NY-381651).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (437).

Derivation (Clifford & Bostock 2007): L. nudus, bare; caulis, stem. Flowering culms leafless.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 40–60 cm long. Culm-internodes unequal, the upper longer, distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 0.3–0.5

mm long. Leaf-blades erect, lanceolate, 4–10 cm long, 5–8 mm wide, coriaceous. Leaf-blade surface glabrous. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 4–7 cm long, bearing few spikelets. 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, acuminate, 2.7–2.9 mm long, 1–1.2 mm wide, 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 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 or 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 mm long, 1 mm wide, indurate, without keel. Lemma margins involute. Lemma apex acute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Alabama, Florida, Louisiana, Mississippi.

Dichanthelium oligosanthes (Schult.) Gould. *Brittonia*, 26(1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum pauciflorum* Elliott, *Sketch Bot. S. Carolina* 1(2): 120 (1816); *Panicum oligosanthes* Schult., *Mant.* 2: 256 (1824). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Elliott herb. s.n.*, May, USA: Georgia (CHARL; IT: US-2808985 (fragm. ex CHARL & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (423 as subsp. *oligosanthes* & *scribnerianum*), F.W.Gould, *The Grasses of Texas* (1975) (493, Fig. 259 as var. *scribnerianum*).

Derivation (Clifford & Bostock 2007): Gk. oligos, few; anthos, flower. Inflorescence with few spikelets.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 15–85 cm long. Culm-internodes distally glabrous or pubescent or hirsute. Culm-nodes glabrous. Lateral branches ample. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths glabrous on surface or hispid, with tubercle-based hairs, outer margin hairy. Ligule a fringe of hairs, 1–4.2 mm long. Leaf-blades lanceolate, 3–14 cm long, 3–12 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence a panicle, terminal and axillary (vernal and autumnal respectively). Axillary inflorescences different from terminal (linear, 1–9 spikelets), enclosed. Panicle open, ovate, 4–13 cm long. Panicle axis glabrous or puberulous. 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 or subacute, 2.9–4 mm long, 1.2–2.2 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.8–2.2 mm long, 0.25–0.5 length of spikelet, membranous, 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, 5 -veined. Upper glume surface glabrous or 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, 5 -veined, glabrous or pubescent, obtuse. Palea of lower sterile floret 0.5 length of lemma. Fertile lemma ovate, dorsally compressed, 2.9–4 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.

Country /Province /State. Western Canada, Northwest USA, North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico. Alberta, British Columbia, Idaho, Montana, Oregon, Washington, Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin, New York, Vermont, New Mexico, Texas, Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia, Northeast Mexico, Gulf (Mexico), Northwest Mexico.

Coahuila, Chihuahua, Neuvo Leon, Tamaulipas. Veracruz. Sonora.

Dichantheium ovale (Elliott) F.W. Gould & C.A. Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1114 (1979).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum ovale* Elliott, *Sketch Bot. S. Carolina* 1(2): 123 (1816)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W. Baldwin s.n.*, no date, USA: Georgia: Camden Co.: St. Mary's (CHARL; IT: US-2383637 (fragm. ex CHARL & photo)).

Recent Synonyms: *Panicum deamii* Hitchcock & Chase, *Publ. State Indiana Dept. Conserv.* No. 82, 284 (1929).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (431 as subspecies. *ovale*, *villosissimum*, *praecocius* & *pseudopubescens*).

Derivation (Clifford & Bostock 2007): L. ovum, egg; -ale, pertaining to. Spikelet elliptical in outline.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Glands annular. Culms 50–140 cm long, 0.7–3 mm diam. Culm-internodes 6–15 cm long, glandular (below nodes), distally hirsute. Culm-nodes bearded. Lateral branches sparse. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths viscid, glabrous on surface or pilose, outer margin glabrous or hairy. Ligule a ciliate membrane, 1 mm long. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 6–15 cm long, 8–13 mm wide, 8–15 mm wide in winter rosette. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, 7–12 cm long, 5–10 cm wide. Primary panicle branches ascending. Panicle axis glabrous or pubescent. 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 elliptic or ovate or orbicular, dorsally compressed, obtuse, 1.8–2.2 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.4–0.5 mm long, 0.25 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent. 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, 5 -veined, prominently veined, pubescent, obtuse. Fertile lemma elliptic, dorsally compressed, 1.8–2.2 mm long, indurate, 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. Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico. Ontario. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Connecticut, Massachusetts, New York. 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), Southeast Mexico.

Mexico State, Puebla. San Luis Potosi, Tamaulipas. Veracruz. Chiapas.

Dichantheium pedicellatum (Vasey) Gould. *Brittonia* 26(1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum pedicellatum* Vasey, *Dept. Agric. Bot. Div. Bull.* 8: 28 (1889). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Reverchon 1620*, Jun 188-, USA: Texas: Kimble Co.: rocky woods (US-2383607; IT: MO, US).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (411), F.W.Gould, *The Grasses of Texas* (1975) (495, Fig. 261).

Derivation (Clifford & Bostock 2007): L. pes, foot; -ellus, diminutive; -ata, possessing. Spikelets shortly stalked.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Culms erect or geniculately ascending, 15–50 cm long. Culm-internodes distally pilose. Culm-nodes pubescent. Lateral branches ample, arising from mid culm or upper culm. Leaves all alike. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 1 mm long. Leaf-blade base broadly rounded. Leaf-blades ascending or spreading, lanceolate, 5–9 cm long, 3–6 mm wide. Leaf-blade surface glabrous or puberulous. Leaf-blade margins ciliate, hairy at base.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle 5–20 cm long. Panicle open, ovate, 3–6 cm long. Primary panicle branches ascending or spreading. Panicle axis pubescent. Panicle branches pubescent, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 elliptic, dorsally compressed, 3.5–3.7 mm long, 1.4 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 0.4–0.5 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume ovate, 0.9 length of spikelet, membranous, without keels, 9–11 -veined. Upper glume lateral veins transversely connected at apex. Upper glume surface pubescent, with tubercle-based hairs. 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, 9 -veined, pubescent, with tubercle-based hairs, acute. Palea of lower sterile floret 0.33 length of lemma. Fertile lemma elliptic, dorsally compressed, 3 mm long, 1.3 mm wide, indurate, shiny, without keel. Lemma margins involute. Lemma apex acute, scabrous. Palea involute, indurate.

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

Country /Province /State. South-central USA, Mexico. Texas. Northeast Mexico, Southwest Mexico. Mesoamerica. Guatemala.

Coahuila, Neuvo Leon, Tamaulipas. Oaxaca.

Dichanthelium peristypum (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum peristypum* Zuloaga & Morrone, *Novon* 1(3): 113–115, f. 2 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.O. Zuloaga, G. Martinelli, R. Kautsky & J. Caruso* 2398, 7 May 1985, Brazil: Espmrito Santo, Domingos Martins Mun.: selva en cerro del Dr. Kautsky (RB; IT: MO-04642679, US-3072500).

Illustrations (Journals): *Novon* (1:114, Fig.2 (1991) as *Panicum*).

Derivation (Clifford & Bostock 2007): Gk. peri, near. The stype between the upper and lower glume is much reduced.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms decumbent, 80 cm long, rooting from lower nodes. Culm-internodes elliptical in section, 7–12 cm long, distally glabrous. Culm-nodes constricted, brown, glabrous. Leaf-sheaths 5–9 cm long, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.3 mm long. Collar pubescent. Leaf-blade base amplexicaul. Leaf-blades lanceolate or oblong, 7–15 cm long, 15–30 mm wide. Leaf-blade surface pubescent. Leaf-blade margins ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 1.5 cm long, 8 cm wide. Primary panicle branches not whorled. Panicle axis eglandular, with scattered hairs. Panicle branches flexuous, scabrous, pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, clavate, 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, 2.4–2.5 mm long, 1 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 1.2–1.4 mm long, 0.5 length of spikelet, membranous, without keels, 1–3 -veined. Lower glume apex acute. Upper glume elliptic, 1.9–2.3 mm long, 0.8–0.9 length of spikelet, membranous, without keels, (7–)9 -veined. Upper glume lateral veins distinct. Upper glume apex acute.

Florets. Basal sterile florets 1, 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 1.7 mm long, 0.8 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.2 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, 1.4 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium perlongum (Nash) R.W. Freckman. *Phytologia*, 39(4): 269 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum perlongum* Nash, *Bull. Torrey Bot. Club* 26(11): 575 (1899). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *M.A. Carleton* 98, 25 Apr 1891, USA: Oklahoma: Creek Nation Territory (NY; IT: US-2808976).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (451).

Derivation (Clifford & Bostock 2007): panicle on a long stalk.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 10–25 cm long. Lateral branches lacking. Leaves all alike. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane or a fringe of hairs. Leaf-blades 6–15 cm long, 2–5 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 4–8 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, obtuse, 2.7–3.2 mm long, falling entire. Rhachilla internodes elongated between glumes.

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 acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent. 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, puberulous. Fertile lemma obovate, dorsally compressed, 2.2–3.2 mm long, indurate, without keel, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Western Canada, Eastern Canada, Northwest USA, North-central USA, Northeast USA, South-central USA, and Southeastern USA. Manitoba, Saskatchewan. Ontario. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Indiana, Michigan.

Dichanthelium petropolitanum (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 816 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum petropolitanum* Zuloaga & Morrone, *Ann. Missouri Bot. Gard.* 78(1): 161–162, f. 6 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Rio de Janeiro: Mun. Petropolis: Araras, base de Pedra Maria Comprida, saxmcola, helisfila, crescendo em beira de rio, 23 Mar 1968, *D. Sucre & P.J. Braga* 2553 (HT: RB).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 162, Fig.6 (1991) as *Panicum petropolitanum*).

Derivation (Clifford & Bostock 2007): L. -anum, indicating location. From Mun. Petropolis, Brazil.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms geniculately ascending, 10–25 cm long, rooting from lower nodes. Culm-internodes terete or elliptical in section, 1–4 cm long, distally glabrous. Culm-nodes constricted, brown, glabrous or pubescent or bearded. Lateral branches ample. Leaf-sheaths 1.5–5.5 cm long, longer than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule a ciliate membrane,

0.2 mm long. Collar glabrous. Leaf-blades linear or lanceolate, 2–5 cm long, 1–3 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle 8–16 cm long. Panicle open, ovate, effuse, 2–4 cm long, 1–3.5 cm wide. Primary panicle branches not whorled. Panicle axis glabrous. Panicle branches glabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–7 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, 2.4–2.6 mm long, 0.9 mm wide, falling entire.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, not clasping, 1.8–2 mm long, 0.75 length of spikelet, membranous, without keels, 1(–3) -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent or obscure. 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, elliptic, 1 length of spikelet, membranous, 9 -veined, acute. Palea of lower sterile floret 1.5 mm long. Fertile lemma elliptic, dorsally compressed, 2.3 mm long, 0.7 mm wide, indurate, shiny, without keel. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.2 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium polyanthes (Schult.) Mohlenbr. *Erigenia* 6: 26 (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 *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum multiflorum* Elliott, *Sketch Bot. S. Carolina* 1(2): 122 (1816); *Panicum polyanthes* Schult., *Mant.* 2: 257 (1824). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.A.G. Bosc s.n.*, no date, USA: North Carolina or South Carolina (CHARL; IT: US-2830911 (fragm.), US-2830910 (fragm.), US-2808943 (fragm. ex CHARL & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (443).

Derivation (Clifford & Bostock 2007): Gk. polys, many; anthos, flower. Inflorescence richly endowed with spikelets.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 30–90 cm long. Culm-nodes glabrous. Lateral branches sparse. Leaves heterophyllous with a basal winter rosette. Ligule absent. Leaf-blade base cordate. Leaf-blades lanceolate, 12–23 cm long, 15–25 mm wide. Leaf-blade margins cartilaginous, ciliate, hairy at base.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 8–25 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 orbicular, dorsally compressed, 1.5–1.6 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25 length of spikelet, membranous, without keels. Lower glume apex obtuse. 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. Lemma of lower sterile floret similar to upper glume, orbicular, 1 length of spikelet, membranous, 7 -veined, puberulous. Fertile lemma orbicular, dorsally compressed, 1.5–1.6 mm long, indurate, without keel, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, Northeast USA, South-central USA, and Southeastern USA. Illinois, Kansas, Missouri, Oklahoma. New Jersey, New York, Pennsylvania, West Virginia. Texas. Alabama, Arkansas, Delaware, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia.

Dichanthelium portoricense (Desvaux ex Hamilton) B.F. Hansen & R.P. Wunderlin. *Ann. Missouri Bot. Gard.*, 75(4): 1649 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum portoricense* Desv. ex Ham., *Prodr. Pl. Ind. Occid.* 11 (1825)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Herb. Desvaux s.n.*, Puerto Rico (P).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (443 as subsp. *portoricense* & *patulum*).

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

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

Habit, Vegetative Morphology. Perennial. Culms erect, 8–28 cm long, 2–6 -noded. Culm-internodes distally glabrous. Culm-nodes pubescent. Lateral branches ample, arising from mid culm or upper culm. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths puberulous to pilose, outer margin hairy. Ligule a fringe of hairs, 0.3–0.7 mm long. Leaf-blades lanceolate, 4–7 cm long, 4–6 mm wide, flaccid. Leaf-blade surface glabrous or pilose. Leaf-blade margins ciliate.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pubescent above. Panicle open, ovate, 2–6 cm long, 2–5 cm wide. Panicle axis glabrous or pubescent. 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, subacute, 1.4–2.3 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.8 mm long, 0.33 length of spikelet, membranous, without keels. Lower glume apex obtuse. Upper glume oblong, 1 length of spikelet, membranous, without keels. Upper glume surface 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, puberulous, obtuse. Fertile lemma oblong, dorsally compressed, 1.4–2.3 mm long, indurate, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp. Embryo 0.33–0.5 length of caryopsis. Hilum punctiform.

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

Country /Province /State. North-central USA, South-central USA, Southeastern USA, Mexico. Iowa. Texas. Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina. Gulf (Mexico). Mesoamerica, Caribbean. Belize, Honduras. Cuba, Dominican Republic, Puerto Rico. Veracruz.

Dichanthelium pycnocladus (Tutin) G. Davidse. L. Brako & J.L. Zarucchi, *Cat. Flow. Pl. Gymn. Peru (Monogr. Syst. Bot. Missouri Bot. Gard.*, 45): 1258 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guyana. **Basionym or Replaced Name:** *Panicum pycnocladus* Tutin, *J. Bot.* 72(864): 340, f. 10 (1934)

. 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): J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (83, Fig. 53).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (80): 168, Fig.34 (1993) as *Panicum*).

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

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, Western South America, Brazil. Guyana, Surinam, Venezuela. Colombia, Ecuador, Peru. Brazil Northeast, Brazil Southeast.

TDWG4.

Dichanthelium ravenelii Scribn. & Merrill. *US Dept. Agric., Div. Agrost. Bull.* 24:36 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum ravenelii* Scribn. & Merr., *Bull. Div. Agrostol., U.S.D.A.* 24: 36 (1901)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: (CHARL; IT: US-2808933 (fragm. ex CHARL & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (423).

Derivation (Clifford & Bostock 2007): in honor of Henry William Ravenel (1814–1887) United States botanist, plant collector and mycologist.

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

Habit, Vegetative Morphology. Perennial. Culms 40–75 cm long. Culm-nodes bearded. Lateral branches fastigiate, arising from mid culm or upper culm. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths pubescent, with tubercle-based hairs. Ligule a fringe of hairs, 3–4 mm long. Leaf-blades lanceolate, 8–13 cm long, 10–25 mm wide. Leaf-blade venation indistinct. Leaf-blade surface pubescent, densely hairy, hairy abaxially.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 7–13 cm long, bearing few spikelets. Panicle axis puberulous. 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, with acute base, dorsally compressed, compressed slightly, obtuse, 3.7–5 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 1.8–2.2 mm long, 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, 7–9 -veined. Upper glume lateral veins prominent. 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, oblong, 1 length of spikelet, membranous, 7–9 -veined, prominently veined, pubescent, obtuse. Fertile lemma oblong, dorsally compressed, 3.7–5 mm long, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 18$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. North-central USA, South-central USA, Southeastern USA. Missouri, Oklahoma. Texas. Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Virginia.

Dichanthelium sabulorum (Lamarck) F.W. Gould & C.A.Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1112 (1979).

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

TYPE from Uruguay. **Basionym or Replaced Name:** *Panicum sabulorum* Lam., *Encycl.* 4: 744 (1798)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Commerson s.n.*, 1767, Uruguay: Montevideo (P-LAM; IT: BAA (fragm.) R, US-2088988 (fragm. ex P-LAM)).

Recent Synonyms: *Panicum fultum* Hack., Fedde, *Repert. Nov. Sp.* 6: 342 (1909). *Panicum deltae* L.Parodi, *Bol. Soc. Argent. Bot.* 12.: 291 (1968).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (405, Fig. 86), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (720, Fig. 152 & 734, Fig. 154 as *Panicum*), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (322, Fig. 131, 315, Fig. 127 & 313, Fig. 126 as *P. fultum* & *P. deltae*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (558, Fig. 147 as *Panicum*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (295, Fig. 85 as var. *polycladum*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (344, Fig. 148 & as *P. demissum*).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (78: 921, Fig.4 (1991) as *Panicum*).

Derivation (Clifford & Bostock 2007): *L. sabulum*, coarse sand. Of course sands, that is a beach species.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 50–100 cm long, without nodal roots or rooting from lower nodes. Culm-internodes distally hirsute. Culm-nodes black, glabrous or pubescent. Lateral branches ample, arising from lower culm or upper culm. Leaves heterophyllous (narrow on older culms). Leaf-sheaths 2.5–6 cm long, eglandular or glandular, glabrous on surface to hirsute, outer margin hairy. Ligule a ciliate membrane, 0.4–1.1 mm long. Leaf-blade base amplexicaul. Leaf-blades filiform, 1–9 cm long, 2–14 mm wide, stiff or firm. Leaf-blade midrib indistinct. Leaf-blade surface glabrous or hispid. Leaf-blade margins scabrous, ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Axillary inflorescences similar to terminal. Panicle open, ovate, effuse, 2–10 cm long, 2–8 cm wide. Panicle axis eglandular or glandular, glabrous or pilose. Panicle branches eglandular or glandular, glabrous or pilose. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, clavate, eglandular or glandular, 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 obovate, dorsally compressed, 1.9–3 mm long, 0.9–1.4 mm wide, falling entire.

Glumes. Glumes similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, clasping, 0.5–0.75 length of spikelet, membranous, without keels, 3–5 -veined. Lower glume apex obtuse or acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume surface glabrous or pilose. 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, 7–9 -veined, glabrous or pilose, acute. Palea of lower sterile floret 1.6 mm long, pilose, adorned on flanks. Fertile lemma elliptic, dorsally compressed, 1.8–2.5 mm long, 0.7–1.2 mm wide, indurate, yellow, shiny, without keel. Lemma margins involute. Lemma apex apiculate. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

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

Country /Province /State. Eastern Canada, Northeast USA, Southeastern USA. Connecticut, Massachusetts, New Jersey, New York, Rhode Island. Delaware, Virginia. **Western South America, Brazil, Southern South America.** Bolivia. Brazil Southeast, Brazil South. Argentina Northeast, Argentina Northwest, Chile Central, Paraguay, Uruguay.

TDWG4. Maule, Biobio, La Araucania.

Dichanthelium scabriusculum (Elliott) F.W. Gould & C.A.Clark. *Ann. Missouri Bot. Gard.*, 65(4): 1110 (1979).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum scabriusculum* Elliott, *Sketch Bot. S. Carolina* 1(2): 121 (1816)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W. Baldwin s.n.*, no date, USA: Georgia: Chatham Co. (CHARL; IT: US-2808950 (fragm. ex CHARL & photo)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (420), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrata Catarinensis Gramineas* (1981–1982) (as *Dichanthelium*).

Derivation (Clifford & Bostock 2007): *L. scabrius*, rougher; -ula, diminutive. Somewhat scabrous usually of leaf-blades or leaf-sheaths.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–150 cm long, 2–3 mm diam., 6–7 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches sparse. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths without exudate, glabrous on surface or hirsute, with tubercle-based hairs. Ligule absent. Leaf-blade base cordate. Leaf-blades lanceolate, 6–13 cm long, 8–15 mm wide, 5–9 mm wide in winter rosette. Leaf-blade surface glabrous or pilose, hairy abaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic or ovate, 8–13 cm long, 6–10 cm wide, bearing few spikelets. Primary panicle branches ascending. Panicle axis glabrous. Panicle branches 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 elliptic, dorsally compressed, obtuse, 2.2–2.8 mm long, 1.2 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.8–1 mm long, 0.33 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent. 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, 5 -veined, prominently veined, pubescent, obtuse. Fertile lemma elliptic, dorsally compressed, 2–2.5 mm long, 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. Northeast USA, South-central USA, Southeastern USA. New Jersey. Texas. Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Virginia. **Brazil.** Brazil Southeast.

Dichanthelium sciurotis (Trin.) G. Davidse. *Novon*, 2(2): 104 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum sciurotis* Trin., *Gram. Panic.* 228 (1826)

. 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): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. *skiouros*, squirrel. Inflorescence resembling the tail of a squirrel.

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

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. Bolivia. Brazil Northeast.

Dichanthelium sciurotoides (Zuloaga & Morrone) G. Davidse. *Novon*, 2(2): 104 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum sciurotoides* Zuloaga & Morrone, *Novon* 1(1): 1, f. la-h (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Y. Mexma 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 (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. skiouros, squirrel. The inflorescence resembles a squirrel's tail. **check!!!!**

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

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, Brazil. Belize, Nicaragua, Panama. French Guiana, Guyana, Venezuela. Bolivia, Ecuador. Brazil Northeast, Brazil Southeast, Brazil South.

Dichanthelium scoparium (Lam.) Gould. *Brittonia*, 26(1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum scoparium* Lam., *Encycl.* 4: 744 (1798)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: A. Michaux s.n., USA: South Carolina (P-MICHX); IT: US-2808935 (fragm. ex P-LAM & photo), US-2771688 (fragm. ex P-MICHX). LT designated (as type) by Lamson-Scribner & Merrill, U.S.D.A. Div. Agrostol. Bull. 24: 36 (1901).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (420).

Derivation (Clifford & Bostock 2007): L. scopae, broom; -aria, pertaining to. Inflorescences condensed resembling a broom.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 80–150 cm long. Culm-internodes glandular (below nodes), distally pubescent. Culm-nodes pubescent. Lateral branches ample. Leaves basal and cauline, heterophyllous with a basal winter rosette. Leaf-sheaths pubescent. Ligule a fringe of hairs, 1–1.3 mm long. Leaf-blades lanceolate, 10–25 cm long, 8–18 mm wide, 13–30 mm wide in winter rosette. Leaf-blade venation distinct. Leaf-blade surface puberulous or pubescent, hairy abaxially.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, ovate, 8–20 cm long. Panicle branches glandular. 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 ovate, with obtuse base, dorsally compressed, compressed slightly, subacute, 2.2–2.8 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 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels, 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 ovate, dorsally compressed, 2.2–2.8 mm long, 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. North-central USA, Northeast USA, South-central USA, Southeastern USA. Iowa, Kansas, Missouri, Oklahoma. Connecticut, Massachusetts, Rhode Island. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. **Caribbean.** Cuba, Dominican Republic, Haiti, Puerto Rico.

Dichanthelium sendulskyi (Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 817 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum sendulskyae* Zuloaga & Morrone, *Novon* 6 (3): 310, f. 1, 4 (1996)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Minas Gerais: Mun. de Jaboticatubas: ao longo da rodovia Lagoa Santa-Conceição do Mato Dentro-Diamantina, 9 Dec 1971, *Sendulsky et al.* 414 (HT: SP; IT: MO, SI, US).

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

Derivation (Clifford & Bostock 2007): In honour of Tatiana Skortzov Sendulsky (1922-) of Russian parentage but born in Harbin, Heilongjiang Province, China, who became a Brazilian botanist.

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

Habit, Vegetative Morphology. Annual. Culms rambling, 50–100 cm long. Culm-internodes terete, 2.5–9 cm long, distally glabrous. Culm-nodes pallid, glabrous or pubescent. Lateral branches ample, arising from lower culm. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule a ciliate membrane, 0.4–0.8 mm long. Collar glabrous or pubescent. Leaf-blade base broadly rounded. Leaf-blades linear, 2.5–9 cm long, 3–6 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous, ciliate, hairy at base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Peduncle 15–25 cm long, glabrous. Panicle open, pyramidal, effuse, 3–8 cm long, 2.5–7 cm wide. Panicle branches glabrous, glabrous in axils or pubescent in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 1.5–5 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, 2.8–3.2 mm long, 1 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, not clasping, 1.8–2 mm long, 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, 9 -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, 9 -veined, prominently veined, acute. Palea of lower sterile floret 2.2–2.4 mm long. Fertile lemma elliptic, dorsally compressed, 2–2.4 mm long, 0.7–0.8 mm wide, indurate, pallid, without keel, more than 3-veined. Lemma surface papillose. Lemma margins involute. Lemma apex with a little green crest and pubescent. Palea involute, indurate.

Flower and Fruit. Lodicules 2, 0.3 mm long, truncate. Anthers 3, 0.6–1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Dichanthelium sphaerocarpon (Ell.) Gould. *Brittonia*, 26(1): 60 (1974).

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

TYPE from USA. **Basionym or Replaced Name:** *Panicum sphaerocarpon* Elliott, *Sketch Bot. S. Carolina* 1(2): 125 (1816)

. 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): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (443), F.W.Gould, *The Grasses of Texas* (1975) (490, Fig. 258 as var. *sphaerocarpon*).

Derivation (Clifford & Bostock 2007): Gk. sphaera, ball; karpos, fruit. Spikelets almost circular in outline.

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

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 rhachilla extension. 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.

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

Country /Province /State. **New Zealand.** New Zealand North I. **Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico.** Ontario. Iowa, Kansas, Missouri, Oklahoma. Massachusetts, Ohio, New Jersey, New York, Pennsylvania, Rhode Island, West Virginia. 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), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba. Venezuela. Colombia, Ecuador. Brazil Southeast.

Puebla. Guanajuato, Queretaro, Zacatecas. Veracruz. Guerrero, Jalisco, Michoacan. Chiapas, Quintana Roo, Yucatan.

Dichanthelium stigosum (Trin.) Zuloaga. *Amer. J. Bot.* 90(5): 817 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum stigosum* Trin., *Gram. Panic.* 194 (1826)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: (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): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. stigma*, mark; -osa, abundance. Leaf-sheath with very small glands.

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

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 or 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 scabrous, 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. **Brazil.** Brazil Southeast, Brazil South.

Dichanthelium stipiflorum (Renvoize) Zuloaga. *Amer. J. Bot.* 90(5): 817 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum stipiflorum* S.A. Renvoize, *Kew Bull.*, 37(2): 329 (1982). 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 Mimosa, 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 Mimosa, 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): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. stipes, stalk; flos, flower.

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

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.

TDWG4.

Dichanthelium strigosum (Muhl. ex Ell.) R.W. Freckmann. *Brittonia*, 33(3): 457 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum strigosum* Muhl. ex Elliott, *Sketch Bot. S. Carolina* 1(2): 126 (1816). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: Elliott s.n., USA: Carolina or Georgia (CHARL; ILT:US-2808953 (fragm. ex CHARL & photo)). LT designated by ?.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (448 as subspecies. *strigosum*, *leucoblepharis* & *glabrescens*).

Derivation (Clifford & Bostock 2007): L. covered with short, bristle-like hairs. One or more organs covered with bristle-like hairs.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 5–30 cm long, 1–3 -noded. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous or pubescent. Lateral branches ample, arising from lower culm. Leaves mostly basal, 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-blades lanceolate, 2.5–6 cm long, 3–8 mm wide, flaccid. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade margins glabrous or tuberculate-ciliate.

Inflorescence. Inflorescence a panicle. Peduncle glabrous or pilose above. Panicle open, ovate, 2–6 cm long, 2–4 cm wide. Panicle axis 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 elliptic or oblanceolate, dorsally compressed, obtuse, 1.1–1.7 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.7 mm long, 0.33–0.5 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, membranous, without keels. Upper glume surface glabrous or puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret similar to upper glume, oblong, 1 length of spikelet, membranous, glabrous or puberulous, acute. Fertile lemma oblong, dorsally compressed, 1.1–1.7 mm long, indurate, 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. South-central USA, Southeastern USA, Mexico. Texas. Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. Venezuela. Colombia.

Oaxaca. Campeche, Chiapas.

Dichanthelium superatum (Hack.) Zuloaga. *Amer. J. Bot.* 90(5): 817 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum superatum* Hack. *Oesterr. Bot. Z.* 51: 427 (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Glaziou 17904*, 7 Mar 1889, Brazil: Rio de Janeiro: Serra dos Orgcos (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) (as *Dichanthrium*).

Illustrations (Journals): *Ann. Missouri Bot. Gard.* (80): 179, Fig.35 (1993) as *Panicum*).

Derivation (Clifford & Bostock 2007): *L. supero*, overtop. Inflorescence projecting conspicuously at anthesis.

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

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.

Dichantherium surrectum (Chase ex Zuloaga & Morrone) Zuloaga. *Amer. J. Bot.* 90(5): 817 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum surrectum* Chase ex Zuloaga & Morrone, *Novon* 1(3): 111, f. 1 (1991)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Minas Gerais: Barbacena, long and tangled in moist brushy base of higher slope, *Chase 8664* (HT: US; IT: F, NY).

Illustrations (Journals): *Novon* (1:112, Fig.1 (1991) as *Panicum*).

Derivation (Clifford & Bostock 2007): L. almost straight.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms scandent, 45–120 cm long. Culm-internodes terete or elliptical in section, 7–13 cm long, distally glabrous. Culm-nodes constricted, brown, glabrous. Lateral branches ample, arising from upper culm. Leaf-sheaths 4–10.5 cm long, glabrous on surface or pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 0.2 mm long. Collar pubescent. Leaf-blades linear or lanceolate, 5–12 cm long, 6–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or pubescent. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, effuse, 3.5–15 cm long, 3–10 cm wide. Primary panicle branches whorled at lower nodes. Panicle axis eglandular or glandular, glabrous. Panicle branches flexuous, eglandular or glandular, glabrous, glabrous in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, eglandular or glandular, 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, 1.8–2.8 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, not clasping, 0.9–1.3 mm long, 0.33–0.5(–0.75) length of spikelet, membranous, without keels, (1–)3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acute. Upper glume elliptic, 1.6–2 mm long, 0.9 length of spikelet, membranous, without keels, 9 -veined. 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, 9 -veined, acute. Palea of lower sterile floret 1.5–1.8 mm long, pilose (at tip). Fertile lemma elliptic, dorsally compressed, 1.6–1.8 mm long, indurate, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate, laterally pinched or pubescent. Palea involute, indurate.

Flower and Fruit. Anthers 3, 1–1.2 mm long. Caryopsis with adherent pericarp, ovoid, 1.3 mm long. Embryo 0.25 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Dichantherium telmatum (Swallen) Zuloaga. *Amer. J. Bot.* 90(5): 817 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Venezuela. **Basionym or Replaced Name:** *Panicum telmatum* Swallen, *Phytologia* 14(2): 81 (1966)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Maguire & Maguire 40400*, 28 Dec 1954, Frontier area between Roraima, Brazil and Bolmvar, Venezuela: Serra do Sol, 2100 m (US-2182190;

IT: NY).

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

Derivation (Clifford & Bostock 2007): Gk. telmatos, pond. Growing in bogs.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms leaning, 50–100 cm long. Culm-internodes terete, distally pubescent. Culm-nodes pubescent. Leaf-sheaths pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 1–1.5 mm long. Collar pubescent. Leaf-blade base broadly rounded. Leaf-blades lanceolate, 3.5–5.5 cm long, 4–9 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, exerted or embraced at base by subtending leaf. Panicle open, pyramidal, 3–5 cm long. Panicle axis pilose. 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 elliptic, dorsally compressed, 3–3.2 mm long, 1.2–1.4 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 2–2.3 mm long, 0.75 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 surface puberulous. 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, puberulous, acute. Palea of lower sterile floret 0.66 length of lemma. Fertile lemma elliptic, dorsally compressed, 2.3–2.5 mm long, 1.1 mm wide, indurate, without keel, 7 -veined, more than 3-veined. 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. Northern South America, Brazil. Venezuela.

Dichanthelium tenue (Muhl.) Freckman & Lelong. *Sida* 20:171 (2002).

Regarded by K as a synonym (*D. dichotomum*).

TYPE from USA. **Basionym or Replaced Name:** *Panicum tenue* Muhl., *Descr. Gram.* 118 (1817)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Muhlenberg hb. 192*, USA (PH-M; ILT: US-2808884 (fragm. ex PH & photo)). LT designated by Lamson-Scribner & Merrill, *Circ. Div. Agrostol.* U.S.D.A. 27:4 (1900).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (439).

Derivation (Clifford & Bostock 2007): L. thin. Culms, leaf-blades or pedicels, slender.

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

Distribution (TDWG). Continent. North America.

Country /Province /State. Northeast USA, South-central USA, Southeastern USA. Pennsylvania, West Virginia. Texas. Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi.

Dichanthelium umbonulatum (Swallen) G. Davidse. *Novon*, 2(2): 105 (1992).

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

TYPE from Guatemala. **Basionym or Replaced Name:** *Panicum umbonulatum* Swallen, *Contr. U.S. Natl. Herb.* 29(9): 420 (1950)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.A. Steyermark 42469*, 13 Jan 1942–13 Jan 1942, Guatemala: Zacapa: Sierra de Las Minas, along rmo Repollal (US-1935002; IT: F, NY).

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

Derivation (Clifford & Bostock 2007): L. umbo, beak; -ulus, diminutive; -atum, possession. The anthoecium is shortly beaked.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent or rambling, 40–100 cm long, rooting from lower nodes. Culm-internodes terete, distally pubescent. Culm-nodes constricted, purple, pubescent. Leaf-sheaths pilose, with simple hairs, outer margin hairy. Ligule a ciliate membrane, 0.6–1 mm long. Collar pubescent. Leaf-blade base broadly rounded or cordate. Leaf-blades lanceolate, 5–12 cm long, 4–14 mm wide.

Leaf-blade surface glabrous or pubescent, hairy adaxially. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle 20 cm long, pubescent above. Panicle open, ovate, effuse, 4–12 cm long, 3.5–10 cm wide. Panicle axis pubescent. Panicle branches scabrous, pubescent in axils. 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, dorsally compressed, plano-convex, 2.4–2.8 mm long, 1–1.1 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, not clasping, 1.2–1.4 mm long, 0.33–0.5 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7–9 -veined. Upper glume surface glabrous or puberulous. 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, glabrous or puberulous, acute. Palea of lower sterile floret 1.5 mm long. Fertile lemma elliptic, dorsally compressed, 2.4–2.5 mm long, 0.9–1.1 mm wide, indurate, pallid, shiny, without keel. Lemma surface papillose. Lemma margins involute. Lemma apex apiculate, with a little green crest or pubescent. Palea involute, indurate.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 1.6 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

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

Country /Province /State. Mexico. Southwest Mexico. **Mesoamerica, Western South America.** El Salvador, Guatemala, Honduras. Ecuador.
Oaxaca.

Dichanthelium viscidellum (Scribner) F.W. Gould. *Brittonia*, 32(3): 357 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. **Basionym or Replaced Name:** *Panicum viscidellum* Scribn., *Circ. Div. Agrostol. U.S.D.A.* 19: 2 (1900)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *C.G. Pringle 8089*, 29 Mar 1899, Mexico: Veracruz: gravelly banks near Jalapa, 1250 m (4000 ft), 3–10 ft long (US-354526; ILT: CM, ISC, M, MO-2963647, P). LT designated by Hitchcock & Chase, *Contr. U.S. Natl. Herb.* 15: 296 (1910).

ST: *Liebmans 323*, Oct 1841, Mexico: Veracruz: in thickets near Mirador (US, MO-2963648).

Recent Synonyms: *Panicum tremulosum* Mez, *Notizbl. Bot. Gart. Berlin-Dahlem* 7: 76 (1917).

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

Derivation (Clifford & Bostock 2007): *L. viscidus*, sticky; -ellum, diminutive. Panicle branches slightly sticky.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 35–110 cm long, 1.5–2 mm diam., without nodal roots or rooting from lower nodes. Culm-internodes distally pilose, with tubercle-based hairs. Culm-nodes bearded. Lateral branches ample, arising from lower culm or mid culm. Leaf-sheaths pilose. Ligule a fringe of hairs, 0.5–1 mm long. Leaf-blade base cordate. Leaf-blades lanceolate, 5–12 cm long, 8–20 mm wide. Leaf-blade surface pubescent, hairy on both sides.

Inflorescence. Inflorescence a panicle. Peduncle 10–22 cm long. Panicle open, obovate, dense, 5–11 cm long, 3–9 cm wide, contracted about secondary branches. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 obovate, dorsally compressed, acute, 1.8–2 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.4–0.7 mm long, 0.25 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.6–1.9 mm long, 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, ovate, 1.6–1.9 mm long, 1 length of spikelet, membranous, 7 -veined, pubescent, acute. Fertile lemma elliptic,

dorsally compressed, 1.6–1.9 mm long, indurate, shiny, without keel. Lemma margins involute. Palea involute, indurate.

Flower and Fruit. Anthers 3, 0.9 mm long, purple. Caryopsis ellipsoid, 1 mm long, pallid.

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. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Cuba. Venezuela. Colombia, Ecuador.

TDWG4. Puebla. Queretaro. Veracruz. Oaxaca. Campeche, Chiapas.

Dichanthelium wilcoxianum (Vasey) R.W. Freckman. *Phytologia*, 39(4): 269 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum wilcoxianum* Vasey, *Dept. Agric. Bot. Div. Bull.* 8: 32 (1889). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T.E. Wilcox s.n.*, 1888, USA: Nebraska: Knox Co.: Fort Niobrara (US-2808945).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (451).

Derivation (Clifford & Bostock 2007): L. -anum, indicating connection. In honor of Timothy Erastus Wilcox (1840–1932), United States botanist.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 10–25 cm long. Culm-internodes distally hirsute. Lateral branches ample. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blades 5–8 cm long, 3–6 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 2–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.7–3 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. Lower glume surface puberulous. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface puberulous. 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, 9 -veined, pubescent. Fertile lemma elliptic, dorsally compressed, 2.7–3 mm long, indurate, without keel, more than 3-veined. Lemma margins involute. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Western Canada, Northwest USA, North-central USA, and South-central USA. Alberta, Saskatchewan. Montana. Iowa, Kansas, Minnesota, North Dakota, Nebraska, South Dakota. New Mexico.

Dichanthelium wrightianum (Scribner) R.W. Freckmann. *Phytologia*, 48(1): 101 (1981).

Regarded by K as a synonym (*D. acuminatum*).

TYPE from Cuba. **Basionym or Replaced Name:** *Panicum wrightianum* Scribn., *Bull. Div. Agrostol., U.S.D.A.* 11: 44, f. 4 (1898)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *C. Wright 3463*, 1860–1864, Cuba (US-2808947; IST: G, MO-1837613). LT designated by Hitchcock & Chase, *Contrb. U.S. Natl. Herb.* 15: 207 (1910).

ST: *T.H. Kearney 307*, Oct 1896, USA: Mississippi: in moist, open areas in pine forests near Biloxi (US-2808947, US-970477).

ST: *S.M. Tracy 2861*, 20 Aug 1894, USA: Mississippi: Horn Island, Biloxi (US-207843).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (431).

Derivation (Clifford & Bostock 2007): L. -anum, indicating connection. In honor of Leonard Wright.

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

Distribution (TDWG). Continent. North America.

Country /Province /State. Northeast USA, South-central USA, Southeastern USA. Massachusetts, Texas, Alabama, Florida, Georgia, Maryland, Mississippi, North Carolina, South Carolina.

Dichanthelium xanthophysum (Gray) R.W. Freckman. *Phytologia*, 39(4): 271 (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 (as *Panicum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Panicum xanthophysum* A. Gray, *N. Amer. Gram.* 1: 28 (1834)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ILT?: A. Gray *s.n.*, no date, USA: New York: near Oneida Lake (US-2808949 (fragm. ex GH)). LT designated by ?.

IT: A. Gray *s.n.*, USA: New York, Pine Plains, near Oneida Lake (MO, US-2808938).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (417).

Derivation (Clifford & Bostock 2007): Gk. xanthos, yellow; physa, bladder. Spikelets yellow-green when dried.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect or geniculately ascending, 20–55 cm long. Culm-internodes antrorsely scabrous. Culm-nodes glabrous. Lateral branches ample, arising from mid culm. Leaves heterophyllous with a basal winter rosette. Leaf-sheaths loose, pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliate membrane, 1 mm long. Leaf-blades erect, lanceolate, 10–15 cm long, 10–20 mm wide. Leaf-blade venation prominent. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, linear, 5–15 cm long, bearing few spikelets. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, compressed slightly, obtuse, 3.7–4 mm long, 2–2.1 mm wide, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 0.5 length of spikelet, membranous, without keels. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent. 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, elliptic, 1 length of spikelet, membranous, prominently veined, pubescent, obtuse. Fertile lemma obovate, dorsally compressed, 2.9–3 mm long, 2 mm wide, indurate, without keel. Lemma margins involute. Lemma apex obtuse. Palea involute, indurate.

Distribution (TDWG). Continent. North America.

Country /Province /State. Western Canada, Eastern Canada, North-central USA, Northeast USA, Southeastern USA. Manitoba, Saskatchewan. New Brunswick, Ontario, Quebec. Minnesota, South Dakota, Wisconsin. Maine, Vermont.

Dichanthium andringitrense A. Camus. *Bull. Soc. Bot. France*, 71: 921 (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: Madagascar, Andringitra: Perrier 13719.

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

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 30–55 cm long. Culm-internodes distally glabrous. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths striately veined. Ligule a ciliate membrane. Leaf-blades 4–16 cm long, 2–4 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, 6–7 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes filiform, 0.33 length of fertile spikelet. Raceme-bases filiform, 2–5 mm long, hirsute. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 3 mm long, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 6–8 in number (lower raceme), male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, male, lanceolate, 6.5 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes winged on keels, 11 -veined. Companion sterile spikelet lemmas enclosed by glumes, 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 elliptic, dorsally compressed, 6.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 6.5 mm long, 1 length of spikelet, chartaceous, without keels, keel-less except near apex, winged on keel, winged narrowly, 14–18 -veined. Lower glume surface glabrous. Lower glume apex attenuate. Upper glume lanceolate, 5.5 mm long, 1-keeled. Upper glume apex dentate, 2 -fid, awned, 1 -awned, awn 2–2.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, hyaline, without keel, 0–3 -veined. Lemma margins ciliate. Lemma apex lobed, 2 -fid, incised 0.66 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Caryopsis with adherent pericarp, oblong or ovoid.

Distribution (TDWG). Continent. Africa.

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

Dichanthium annulatum x Bothriochloa bladhii

Accepted by: N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

Illustrations (Books): E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (119, Fig. 17).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Pakistan.

Dichanthium annulatum (Forssk.) Stapf. Prain, *Fl. Trop. Afr.* 9: 178 (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), 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 Egypt. **Basionym or Replaced Name:** *Andropogon annulatus* Forssk., *Fl. Aegypt.-Arab.* 173 (1775). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Egypt: Rashid, banks of Nile River, June 1762, *Forsskal* 127 (HT: C; IT: LD).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (294, Fig. 232), G.V.Pope et al., *Flora Zambesiaca* 10 (4(2002):39, T. 15), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (481, Fig. 394 as *D. papillosum*), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984) (as *D. papillosum*), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (105, Fig. 2 var. *pa*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (239, Fig. 85), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 428), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (309, Fig. 124), L.Boulos, *Flora of Egypt* 4 (2005) (335, Pl. 98), N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (524, Pl. 200), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (666), C-C Hsu, *Taiwan Grasses* (1975), K.M.Mathew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl. 844 & 845), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (281, Fig. 30), H.J.Noltie, *The Grasses of Bhutan* (2000) (795, Fig. 56), H.B.Gilliland, *Grasses of Malaya* (1971), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (49, Fig. 39), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (327, Pl. 95 & 329, Pl. 96), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (188(7)), 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) (638), F.W.Gould, *The Grasses of Texas* (1975) (590, Fig. 311), S-L Chen et al, *Flora of China*, *Illustrations*, *Poaceae* (2007) (Fig. 846), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:39(1980)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, L.Boulos, *Flora of Egypt* 4 (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): nodes bearded.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 25–100 cm long. Ligule an ciliate membrane. Leaf-blades 3–30 cm long, 2–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes (1–)2–15, digitate, 3–7 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes filiform. Raceme-bases filiform, glabrous. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets absent or well-developed, 0–12 in number (lower raceme), 0–12 in upper racemes, barren or male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas or male, oblong, as long as fertile, separately deciduous. Companion sterile spikelet lemmas enclosed by glumes, mucous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. 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, 2–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, cartilaginous, without keels. Lower glume surface concave, pubescent to villous, hairy below, with tubercle-based hairs (on margins & fringe), without hair tufts or with a transverse fringe of hair. Lower glume margins ciliate. Lower glume apex obtuse or acute. Upper glume lanceolate, 1-keeled, 3 -veined. Upper glume margins ciliolate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 8–25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

$N = 10$ (1 ref TROPICOS), or 20 (6 refs TROPICOS). $2n = 40$ (2 refs TROPICOS), or 50 (3 refs TROPICOS).

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

Country /Province /State. **Northern Africa, Macaronesia, West tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Algeria, Egypt, Libya, Morocco, Tunisia. Cape Verde, Madeira. Mali, Senegal. Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Swaziland, Free State, Kwazulu-Natal, Northern Cape, Eastern Cape. Mauritius (*), Madagascar (*). **Western Asia, Arabian Peninsula, China, Eastern Asia.** Iran, Iraq. Gulf States, Kuwait, Oman. China South Central, Hainan, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Assam, Bangladesh, Eastern Himalaya, India, Nepal, Pakistan. Andaman Is, Myanmar, Thailand, Vietnam. Borneo, Lesser Sunda Is, Malaya, Philippines, Sulawesi. New Guinea PNG, or West Papua (Irian Jaya). New Guinea, Solomon Is (*). **Australia.** Western Australia (*), Northern Territory (*), Queensland (*). **Southwestern Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), Niue (*), New Caledonia (*), Samoa (*), Tonga (*). Easter Is (*), Marquesas (*). Hawaii (*). **South-central USA, Southeastern USA, Mexico.** Texas. Florida, Louisiana. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Southern South America.** Belize, Costa Rica, Guatemala, Nicaragua, Panama. Cuba, Haiti, Leeward Is, Windward Islands, Puerto Rico. Guyana. Colombia.

TDWG4. Guangdong, Guangxi, Guizhou, Hubei, Sichuan, Yunnan. Manipur. Kerala. West Bengal. Ereman. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. North, Central, South East, Inland. Santa Fe. Morelos. Aguascalientes, Coahuila, Chihuahua, Neuvo Leon, San Luis Potosi, Tamaulipas. Jalisco, Oaxaca. Campeche, Quintana Roo, Yucatan.

Dichanthium aristatum (Poir.) C. E. Hubbard. *Kew Bull.* 1939, 654 (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), 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 Mauritius. **Basionym or Replaced Name:** *Andropogon aristatus* Poir., *Encycl., Suppl.* 1: 585 (1811). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mauritius: 'ce'tte plante a iti observe a l'Ile-de-France, *Commerson s.n.* (Herb. Desfontaines).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (241, Fig 86), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (668), C-C Hsu, *Taiwan Grasses* (1975), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (188(6)), 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) (638), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (530, Fig. 191), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 179, Fig. 21 (2006)), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 846), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:40(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. arista, bristle; -ata, possessing. The apices of lemmas, paleas or glumes drawn out into a distinct awn.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 20–100 cm long. Ligule an eciliate membrane. Leaf-blades 3–25 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above. Racemes 1–6, digitate, 2–8 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes filiform. Raceme-bases filiform, pubescent. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–12 in number (lower raceme), 2–12 in upper racemes, barren or male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas or male, oblong, as long as fertile, separately deciduous. Companion sterile spikelet lemmas enclosed by glumes, mucous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, 2–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or obovate, 1 length of spikelet, chartaceous, of similar consistency above or much thinner above, without keels. Lower glume surface convex, pilose, hairy below, with simple hairs. Lower glume margins eciliate or ciliate. Lower glume apex obtuse or acute. Upper glume lanceolate, 1-keeled.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 10–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

$2n = 20$ (1 ref TROPICOS), or 40 (1 ref TROPICOS).

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

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa (*), Middle Atlantic ocean, Western Indian ocean. Tanzania. Mozambique, Zambia, Zimbabwe. Limpopo, Gauteng, Free State, Kwazulu-Natal. Ascension. Mauritius (*), Madagascar (*), Reunion (*), Rodrigues (*), Seychelles. Arabian Peninsula, China, Eastern Asia. Oman. China South Central. Nansei-Shoto, Taiwan. **Indian Subcontinent, Malesia, Papuasias.** India. Java, Lesser Sunda Is, Philippines, Sulawesi. New Guinea PNG. New Guinea, Solomon Is (*). **Australia.** Western Australia (*), Northern Territory (*), Queensland (*). **Southwestern Pacific, North-central Pacific.** Fiji (*), New Caledonia (*), Tonga (*). Marquesas (*). Caroline Is (*), Marianas (*). Hawaii (*). **South-central USA, Southeastern USA, Mexico.** Texas. Florida, Louisiana. Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Southern South America.** Costa Rica, Honduras, Panama. Jamaica. Guyana. Colombia, Ecuador. Argentina Northeast.

TDWG4. Yunnan. Kerala, Karnataka. Madhya Pradesh, Maharashtra, Rajasthan, Tamilnadu, Uttah Pradesh. Kimberley. Darwin & Gulf. North, Central, South East, Inland. Coast. Chaco, Corrientes, Formosa. Guanajuato, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Sonora. Michoacan, Nayarit. Campeche, Quintana Roo, Yucatan.

Dichanthium armatum (Hook.f.) Blatter & McCann. *Journ. Bombay Nat.Hist. Soc.* 2: 425 (1928).

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 *Andropogon armatus* Hook. f., *Fl. Brit. India* 7(21): 197 (1897)[1896].

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: "The Concan, Stocks.",.

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

Derivation (Clifford & Bostock 2007): L. armed. Lower glume has stiff hairs on its margin.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 30–45 cm long. Culm-nodes bearded. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades 10–15 cm long, 4–6 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, 1.3–3.8 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes linear. Raceme-bases filiform, dichotomously branched, 4–8 mm long, pilose, hairy in axils. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number (lower raceme), 2 in upper racemes, male, elliptic, 3 mm long, equalling fertile. Basal sterile spikelet glumes chartaceous, tuberculate, setose, lemmas awnless.

Companion sterile spikelets well-developed, male, elliptic, 3 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, tuberculate, setose (hairs 5–7 mm long), ciliate on margins. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, obtuse, 3 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, cartilaginous, without keels. Lower glume surface convex, pitted (1 pit), pubescent, hairy below. Lower glume margins ciliate. Lower glume apex obtuse. Upper glume elliptic, cartilaginous, 1-keeled. Upper glume surface pubescent, hairy above. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear or oblong, hyaline, obtuse. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 20–25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Gujarat.

Dichanthium caricosum (L.) A. Camus. *Bull. Mus. Hist. Nat. Paris*, 27: 549 (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), 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 *D. pallidum*, *D. theinlwini*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from India. **Basionym or Replaced Name:** *Andropogon caricosus* L., *Sp. Pl. (ed. 2)* 2: 1480 (1763). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India:, *Burmans? s.n.* (HT: G).

Illustrations (Books): K.M.Matthew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pl.744 & Pl.745), H.B.Gilliland, *Grasses of Malaya* (1971) (285, Fig. 61), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (49, Fig. 40), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 847), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:41(1980)).

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

Derivation (Clifford & Bostock 2007): L. carex, reed-grass; -osum, abundance. Densely caespitose with much branched culms.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 25–100 cm long. Ligule an eciliate membrane. Leaf-blades 3–30 cm long, 2–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 1–10, digitate, 3–7.5 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes filiform. Raceme-bases filiform, glabrous. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–6 in number (lower raceme), 2–6 in upper racemes, barren or male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas or male, oblong, as long as fertile, separately deciduous. Companion sterile spikelet lemmas enclosed by glumes, 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 elliptic or obovate, dorsally compressed, 3–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or obovate, 1 length of spikelet, chartaceous, of similar consistency above or much thinner above, without keels. Lower glume surface convex, pilose, hairy below, with simple hairs. Lower glume margins eciliate or ciliate. Lower glume apex obtuse or acute. Upper glume lanceolate, 1-keeled.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 10–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

$N = 20$ (1 ref TROPICOS). $2n = 40$ (1 ref TROPICOS).

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

Country /Province /State. **East tropical Africa, Western Indian ocean.** Tanzania. Mauritius (*). **Arabian Peninsula, China.** Gulf States, Kuwait, Oman. China South Central. **Indian Subcontinent, Indo-China, Malasia, Papuasias.** Assam, Bangladesh, India, Sri Lanka. Andaman Is, Myanmar, Thailand, Vietnam. Java, Malaya, Singapore. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Australia.** Queensland (*). **Southwestern Pacific, Northwestern Pacific.** Fiji (*), Niue (*), New Caledonia (*). Cook Is (*). Marianas (*), Marshall Is (*). **Mesoamerica, Caribbean, Northern South America.** Honduras. Cuba, Leeward Is, Windward Islands (& as *Andropogon caricosus*). Guyana.

TDWG4. Guizhou, Yunnan. West Bengal. North, South East.

Dichanthium concanense (Hook.f.) S.K. Jain & U.R.Deshpande. *Bull. Bot. Surv. India*, 20(1–4): 134 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *Bothriochloa*).

TYPE from India. **Basionym or Replaced Name:** *Andropogon concanensis* Hook. f., *Fl. Brit. India* 7(21): 174 (1897)[1896].

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Bombay, Woodrow 28.

Recent Synonyms: *Bothriochloa concanensis* (Hook. f.) Henrard, *Blumea*, 3: 457 (1940).

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

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

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms 50–60 cm long. Culm-nodes glabrous. Leaves cauline. Leaf-sheaths without keel, smooth. Ligule an eciliate membrane, truncate. Leaf-blades 20–25 cm long, 2–3 mm wide. Leaf-blade surface smooth. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–8, digitate, 5–7 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis internodes linear, 2 mm long. Rhachis internode tip transverse. Raceme-bases filiform, simple or dichotomously branched, 13–20 mm long, pilose, hairy at base. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, flattened, 2 mm long, without a translucent median line, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, lanceolate, 3.5–4 mm long, longer than fertile. Companion sterile spikelet glumes 9 -veined.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 3–3.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, chartaceous, without keels, keel-less except near apex, 7–9 -veined. Lower glume surface flat. Lower glume margins ciliate. Upper glume lanceolate, 1 length of spikelet, 1-keeled, 3 -veined. Upper glume apex acuminate, mucronate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0 -veined, without midvein, without lateral veins, acute. Fertile lemma linear, 2.5 mm long, hyaline,

without keel, 0–3 -veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.
Maharashtra.

Dichanthium erectum Ohwi. *Bull. Tokyo Sci. Mus.*, No. 18, 11 (1947).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Lesser Sunda Islands: Ins. Timor, Walsh 45 (HT: BO).

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

Derivation (Clifford & Bostock 2007): L. held upright. Spikelets or inflorescence branches held erect.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, slender, 30–60 cm long, wiry. Culm-internodes smooth, distally glabrous. Lateral branches lacking. Leaf-sheaths tight, with 0.9 of their length closed, mostly shorter than adjacent culm internode, without keel, glabrous on surface. Ligule an eciliate membrane. Leaf-blades erect, 3–4 cm long, 2–7 mm wide, stiff, glaucous. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 3–5 cm long, bearing 5–10 fertile spikelets on each. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes filiform, 2.5–3 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 1.5 mm long, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–4 in number, barren or male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas or male, oblong, as long as fertile, separately deciduous. Companion sterile spikelet glumes without depressions or pitted (1–3 pits). Companion sterile spikelet lemmas enclosed by glumes, mucinous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, 4.5–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate or elliptic, 1 length of spikelet, chartaceous, without keels, winged on margins, winged narrowly, 6–7 -veined. Lower glume primary vein ciliolate (above). Lower glume lateral veins obscure. Lower glume surface convex. Lower glume apex acute. Upper glume oblong, 1-keeled. Upper glume mucinous or mucronate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret 3 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 15–20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Lesser Sunda Is.

Dichanthium fecundum S. T. Blake. *Univ. Queensl. Papers, Dept. Biol.*, 2 No. 3, 51 (1944).

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, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: S.T. Blake 8337, 28 Mar 1935, Australia: Queensland: North Kennedy Dist. (US-1865523).

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (327, Pl. 95), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1146, Fig. 329), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (188(1)), 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. fruitful. Producing abundant spikelets.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect or geniculately ascending, 60–120 cm long, 3–4 -noded. Culm-nodes bearded. Lateral branches sparse. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Leaf-sheath oral hairs bearded. Ligule a ciliolate membrane, 0.5–1.5 mm long, pubescent on abaxial surface, truncate. Collar glabrous or pubescent. Leaf-blades flat or revolute, 10–25 cm long, 2–5 mm wide, glaucous. Leaf-blade venation with 7–9 secondary veins. Leaf-blade surface scaberulous, rough on both sides, pilose, sparsely hairy, hairy adaxially. Leaf-blade margins cartilaginous, scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–6, single or paired or digitate, 4–6 cm long. Central inflorescence axis 0–1.5 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs 1–1.7 mm long. Rhachis internodes filiform, 1.5–2 mm long. Raceme-bases filiform, 3–7 mm long, glabrous or pilose. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, 1.5–2 mm long, without a translucent median line, ciliate, with 1–1.3 mm long hairs.

Sterile Spikelets. Basal sterile spikelets well-developed, 4 in number. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, male or male with a few bisexual, elliptic, 5.5–6.5 mm long, longer than fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, 9–11 -veined, obtuse. Companion sterile spikelet lemmas enclosed by glumes, muticous or 1-awned (when bisexual), with 0–14 mm long awn.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, obtuse, 4.5–5.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, cartilaginous, without keels, 7–9 -veined. Lower glume primary vein scabrous. Lower glume surface concave, pubescent, hairy below, with tubercle-based hairs (on fringe), without hair tufts or with a transverse fringe of hair. Lower glume hairs 2–3 mm long. Lower glume apex truncate. Upper glume lanceolate, 1-keeled, 3 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret 2–3 mm long, hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 15–28 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 2 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.9–2.5 mm long.

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

Country /Province /State. Papuaia. New Guinea. **Australia.** Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley, Eremean. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. North, Central, South East, Inland.

Dichanthium foulkesii (Hook.f.) S.K. Jain & U.R.Deshpande. *Bull. Bot. Surv. India*, 20(1–4): 134 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *Bothriochloa*).

TYPE from India. **Basionym or Replaced Name:** *Andropogon foulkesii* Hook. f., *Fl. Brit. India* 7(21): 174 (1897)[1896].

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Wight s.n.*, India: Nilghiri Hills, ...

ST: *Foulkes s.n.*, India: Kaity.

Illustrations (Books): K.M.Mathew, *Flora Palni Hills* (1996) (789, Pl 789 as *Bothriochloa*).

Derivation (Clifford & Bostock 2007): in honor of Thomas Foulkes (fl. 1855–60) English cleric who collected in India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 20–80 cm long. Culm-nodes glabrous. Leaf-sheaths keeled. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane. Leaf-blades 10–25 cm long, 2–5 mm wide, mid-green or glaucous. Leaf-blade midrib conspicuous. Leaf-blade surface glabrous or hispid. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, digitate, 3–8 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis hairs lengthening towards internode tip. Rhachis internodes linear, 2.5–3 mm long. Raceme-bases filiform, 10 mm long, hirsute, hairy at base. Spikelets in pairs. Fertile

spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2–3 mm long, without a translucent median line, ciliate, hairy all along but hairs longer above.

Sterile Spikelets. Basal sterile spikelets absent.

Companion sterile spikelets well-developed, male, elliptic, 5–6 mm long, longer than fertile, separately deciduous. Companion sterile spikelet glumes 7–9 -veined, ciliate on margins. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, without keels, keel-less except near apex, 7–9 -veined. Lower glume primary vein scabrous. Lower glume surface flat or concave. Lower glume apex acute. Upper glume elliptic, 1-keeled, 3 -veined. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 3.5–4 mm long, hyaline, 3–5 -veined, obscurely veined. Fertile lemma linear, 2–3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 15–25 mm long overall, with twisted column. Column of lemma awn 6–8 mm long, glabrous. Palea absent or minute.

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

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Tamilnadu.

Dichanthium foveolatum (Delile) Roberty. *Monogr. Syst. Andropog. du Globe* :163 (1960).

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 *Eremopogon*).

TYPE from Egypt. **Basionym or Replaced Name:** *Andropogon foveolatus* Delile, *Descr. Egypte, Hist. Nat.* 2: 160 (1812)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A.R. Delile *s.n.*, no date, Egypt: l'isthe de Soneys (P; IT: K, US-22276198 (fragm.)).

Recent Synonyms: *Eremopogon foveolatus* (Del.) Stapf, Prain, *Fl. Trop. Afr.* 9: 183 (1917).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (296, Fig. 234 as *Eremopogon foveolatus*), R.M.Pohill, F.T.E.A., *Gramineae* (3(1982):724, Fig. 167), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 429 as *Eremopogon foveolatus*), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (309, Fig. 124), L.Boulos, *Flora of Egypt* 4 (2005) (335, Pl. 98), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae), *Flora of Somalia* (1995) (255, Fig. 149), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl. 867 as *Eremopogon foveolatus*).

Derivation (Clifford & Bostock 2007): L. fovea, pit; -olus, minute. -atum, possessing.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms geniculately ascending, 15–80 cm long, wiry. Ligule a ciliolate membrane. Leaf-blades flat or convolute, 1–15 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes, subtended by a spatheole, enclosed. Spatheole linear, 3.5–5 cm long, herbaceous. Peduncle pubescent above. Racemes 1, single, 1.5–4.5 cm long. Rhachis fragile at the nodes, subterete, 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, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets absent or well-developed, 0–2 in number, barren or male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas, oblong, as long as fertile, persistent. Companion sterile spikelet glumes without depressions or pitted. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2.5–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus bearded, base obtuse, attached obliquely. Spikelet callus hairs 0.5 length of spikelet.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma, shiny. Lower glume elliptic, 1 length of spikelet, cartilaginous, without keels. Lower glume surface concave, pitted, glabrous. Lower glume apex acute. Upper glume lanceolate, 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 2 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliolate on margins. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire or dentate, 2 -fid, awned, 1 -awned. Principal lemma awn apical or from a sinus, geniculate, 12–18 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

N = 20 (1 ref TROPICOS).

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

Country /Province /State. Northern Africa, Macaronesia, West tropical Africa, Northeast tropical Africa, East tropical Africa. Algeria, Egypt, Libya. Canary Is, Cape Verde. Mali, Mauritania. Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Kenya, Tanzania. Western Asia, Arabian Peninsula. Iran, Sinai. Gulf States, Kuwait, Oman, Saudi Arabia. Indian Subcontinent, Indo-China. Bangladesh, India, Pakistan, Sri Lanka, West Himalaya. Myanmar.

TDWG4. Bihar. Madhya Pradesh, Orissa, Tamilnadu.

Dichanthium jainii (U.R. Deshpande & Hemadri) U.R. Deshpande. *Bull. Bot. Surv. India*, 21: 198 (1981).

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

TYPE from India. **Basionym or Replaced Name:** *Bothriochloa jainii* Deshp. & Hemadri, *Indian Forester* 97(10): 593 (1971)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *K. Hemadri 104241G*, 29 Oct 1964, India: Maharashtra: Dist. Poona: Junnar (LE). Botanical survey of India.

IT: *K. Hemadri 104241F*, 29 Oct 1964, India: Maharashtra, Poona Dist. (US-2828310).

IT: *K. Hemadri 104241E*, 29 Oct 1964, India: Maharashtra, Pune, Junnar (L).

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

Derivation (Clifford & Bostock 2007): in honor of Sudhanshu Kumar Jain (1926-) Indian botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 100–150 cm long, 5–8 -noded. Culm-internodes smooth, distally glabrous. Culm-nodes bearded. Leaf-sheaths 15–25 cm long, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2–5 mm long, lacerate, obtuse. Leaf-blades 30–65 cm long, 8–15 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–15, digitate or borne along a central axis, 5–10 cm long. Central inflorescence axis 2–14 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear. Rhachis internode tip transverse. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 3 mm long, without a translucent median line, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 6.5–9 mm long, longer than fertile. Companion sterile spikelet glumes ciliate on margins. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 5.25–6.25 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, without keels, keel-less except near apex. Lower glume surface with a longitudinal median groove. Lower glume margins ciliate. Upper glume lanceolate, 1 length of spikelet, chartaceous, with hyaline margins, 1-keeled, 1 -veined. Upper glume margins ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 4–4.8 mm long, hyaline, ciliate on margins, fringed above. Fertile lemma linear, 3–3.8 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 20–23 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 3 mm long, yellow.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.
TDWG4. Maharashtra.

Dichanthium mccannii Blatter. *Journ. Bombay Nat. Hist. Soc.* 32: 357 (1927).

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 India. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: India, Panchgani: McCann.

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

Derivation (Clifford & Bostock 2007): in honor of Charles McCann (fl. 1930–1950) cleric and amateur botanist who collected in India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 20–45 cm long. Culm-nodes bearded. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 6–12 cm long, 5–12 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, single or paired or digitate, 3–5 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes linear. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 6–8 in number, barren or male, elliptic or oblong, 3.5–4.5 mm long. Basal sterile spikelet glumes winged on keel, tuberculate on margins or ciliate on margins.

Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 4–5 mm long, longer than fertile, separately deciduous. Companion sterile spikelet glumes tuberculate on margins, ciliate on margins. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, obtuse, 3.5–4.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels. Lower glume surface tuberculate (along fringe), with a transverse fringe of hair. Upper glume lanceolate, 1-keeled, 3 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 25–30 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Maharashtra.

Dichanthium micranthum T.A. Cope. *Publ. Cairo Univ. Herb.*, 78: 325 (1977).

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

TYPE from Yemen. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Arabia: plain behind Salalah, Dhufar, 26 Sep 1943, *Vesey FitzGerald 12316/1* (HT: K; IT: K).

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

Derivation (Clifford & Bostock 2007): Gk. mikros, small; anthos, flower. Spikelets small.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 15–20 cm long. Culm-internodes smooth, distally glabrous. Culm-nodes bearded. Lateral branches ample. Ligule a ciliate membrane. Leaf-blades flat or conduplicate, 5–10 cm long, 1.5–2.5 mm wide, pruinose. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 1–2 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs 0.5–0.8 mm long. 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, without a translucent median line, ciliate, with 0.2–0.5 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, containing empty lemmas, obovate, 2.5–3 mm long, longer than fertile, persistent. Companion sterile spikelet glumes coriaceous, keeled, 5–9 -veined, pitted, pilose (on keel). Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 2–2.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached obliquely. Spikelet callus hairs 0.5–0.8 mm long, 0.25 length of spikelet.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, cartilaginous, without keels, 4 -veined. Lower glume primary vein ciliate. Lower glume surface concave, pitted, glabrous. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, without keels. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma linear, hyaline, without keel. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 16–22 mm long overall, with twisted column. Column of lemma awn puberulous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1.25–2 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Arabian Peninsula. Oman.

Dichanthium mucronulatum Jansen. *Acta Bot. Neerl.* 1: 473 (1952).

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 Malaysia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Malay Peninsula: Gira Bate, on rocks at low altitude, *Ridley 8129* (HT: SING).

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

Derivation (Clifford & Bostock 2007): lower glume distinctly mucronate.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–75 cm long, wiry. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades tapering towards sheath, 15–30 cm long, 2–3 mm wide. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 2.5 cm long. Rhachis fragile at the nodes, subterete, glabrous on margins. Rhachis internodes filiform. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, without a translucent median line, glabrous.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number, male, elliptic, equalling fertile. Basal sterile spikelet glumes chartaceous, lemmas awnless.

Companion sterile spikelets well-developed, male, elliptic, 3.8 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, 9 -veined, dentate, 3 -fid. Companion sterile spikelet lemmas 1, enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 3.6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 0.5 mm long, pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume ovate, 1 length of spikelet, cartilaginous, without keels, keel-less except near apex, winged on keel, winged narrowly, winged near apex, 7 -veined. Lower glume surface convex, glabrous. Lower glume margins eciliate. Lower glume apex dentate, 3 -fid. Upper glume lanceolate, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret 2.4 mm long, hyaline, ciliate on margins. Fertile lemma linear, 2.6 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire or dentate, 2 -fid, awned, 1 -awned. Principal lemma awn apical or from a sinus, geniculate, 15–25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Thailand. Malaya, Singapore.

Dichanthium oliganthum (Hochst. ex Steud.) T.A. Cope. *Kew Bull.*, 35(3): 703 (1980).

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 *Indochloa*).

TYPE from India. **Basionym or Replaced Name:** *Andropogon oliganthus* Hochst. ex Steud., *Syn. Pl. Glumac.* 1: 368 (1854)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Nilgiri Hills, Kaity: Hohenacker 1288 (K iso).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (173, Fig 9as *Indochloa oligantha*), K.M.Matthew, *Flora Palni Hills* (1996) (812 & 813, Pl 812 & 813).

Derivation (Clifford & Bostock 2007): Gk. oligos, few; anthos, flower. Inflorescence of few spikelets.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, weak, 10–30 cm long, rooting from lower nodes. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades 5–7.5 cm long, 2–3 mm wide. Leaf-blade midrib widened. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins cartilaginous, scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle hirsute above, widened at apex. Racemes 1(–2), single, 2–3.5 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis hairs white. Rhachis internodes linear, 2 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, flattened, 2.25 mm long, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 6 in number, sessile and pedicelled, barren, elliptic, 4–5 mm long, larger than fertile. Basal sterile spikelet glumes chartaceous, glabrous or pilose (at tip), lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas, elliptic, 4–5.5 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, 9–11 -veined, pilose (above), truncate. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, truncate, 4–5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 3.5 mm long, 0.9 length of spikelet, chartaceous, without keels, keel-less except near apex, 6 -veined. Lower glume surface convex or flat, pubescent. Lower glume margins ciliate. Lower glume apex truncate. Upper glume lanceolate, chartaceous, 1-keeled.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 2.5–3 mm long, hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, 1.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 30–35 mm long overall, with twisted column. Column of lemma awn puberulous, hairy on the spiral. Palea absent or minute.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, obovoid, 2 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Maharashtra, Tamilnadu.

Dichanthium panchanganiense Blatter & McCann. *Journ. Bombay Nat. Hist. Soc.* 2: 357 (1927).

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 India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Habitat: ... in the village and on the Tableland of Panchgani, Satara District of the Bombay Presidency. Nov. 1925., *C. McCann s.n.*.

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

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Panchangi, Bombay State, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 15–40 cm long. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane. Leaf-blades 5–10 cm long, 3–6 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, single or paired or digitate, 1–3 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes linear. Raceme-bases filiform, 2–5

mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 6–8 in number, barren or male, elliptic or oblong, 3–4 mm long. Basal sterile spikelet glumes pitted, pilose, tuberculate on margins or ciliate on margins.

Companion sterile spikelets well-developed, containing empty lemmas or male, lanceolate, 4–5 mm long, longer than fertile, separately deciduous. Companion sterile spikelet glumes pitted, tuberculate on margins, ciliate on margins. Companion sterile spikelet lemmas enclosed by glumes, 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 oblong, dorsally compressed, obtuse, 3–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels. Lower glume surface pitted, pilose, hairy below. Upper glume lanceolate, 1-keeled, 3 -veined. Upper glume primary vein ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 15–25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Maharashtra.

Dichanthium paranjpyeanum (Bhide) W.D. Clayton. *Kew Bull.*, 32(3): 579 (1978).

Accepted by: W.D. Clayton & K. Harman, *GrassBase* (2008) and online, N.L. Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *Schizachyrium*).

TYPE from India. **Basionym or Replaced Name:** *Andropogon paranjpyeanus* Bhide, *J. Proc. Asiat. Soc. Bengal* 7: 514 (1911)

. T: <Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Bhide s.n.*, India: Bombay, Castle Rock (?; IT: K).

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

Derivation (Clifford & Bostock 2007): L. -anum, indicating connection. In honor of H.P. Paranjpye (fl. 1911) Indian botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 30–45 cm long, rooting from lower nodes. Culm-nodes pubescent. Lateral branches ample. Ligule a ciliate membrane. Leaf-blades 2.5–7.5 cm long, 2 mm wide. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins cartilaginous.

Inflorescence. Inflorescence composed of racemes. Peduncle flexuous, glabrous. Racemes 1, single, 1.2–2.5 cm long. Rhachis fragile at the nodes, flattened, ciliate on margins. Rhachis internodes linear. Rhachis internode tip transverse. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, without a translucent median line, ciliate.

Sterile Spikelets. Basal sterile spikelets absent.

Companion sterile spikelets well-developed, male, oblong, 4–6 mm long, longer than fertile, separately deciduous. Companion sterile spikelet glumes chartaceous, winged on keels (above), 7–9 -veined, obtuse. Companion sterile spikelet lemmas enclosed by glumes, 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 oblong, dorsally compressed, 3–4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus square, pilose, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, cartilaginous, without keels, 5–7 -veined. Lower glume surface flat. Lower glume margins ciliate (at tip). Lower glume apex obtuse. Upper glume oblong, 3 -veined. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 2.5–3 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliate on margins, obtuse. Fertile lemma linear, 2.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex lobed, 2 -fid, with linear lobes, incised 0.2 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 40 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.
TDWG4. Maharashtra.

Dichanthium queenslandicum B.K. Simon. *Austrobaileya*, 1(5): 457 (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, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Queensland: 10 km E of Capella, *Simon & Bisset* 2882 (HT: BRI-228113; IT: CANB, K, MO).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (188(9)), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (259, Fig. 39).

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: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–80 cm long, 4–5 -noded. Culm-nodes bearded. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule a ciliolate membrane, 1–1.5 mm long. Leaf-blades 9–18 cm long, 3–5 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, 5–10 cm long, bearing 15–30 fertile spikelets on each. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs on upper part of internode or on lower part of internode, 2–3 mm long. Rhachis internodes linear, 2.5 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, without a translucent median line, ciliate, hairy above, with 2–3 mm long hairs.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 6 mm long, shorter than fertile, separately deciduous. Companion sterile spikelet glumes 11 -veined. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 7.5–8.5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely. Spikelet callus hairs 0.3 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, without keels, keel-less except near apex, winged on margins, winged above, 11 -veined. Lower glume surface convex. Lower glume apex dentate. Upper glume lanceolate, coriaceous, 1-keeled, 3 -veined. Upper glume primary vein grooved on either side. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret 5 mm long, hyaline. Fertile lemma linear, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 20 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central, South East.

Dichanthium sericeum (R. Br.) A. Camus. *Bull. Mus. Hist. Nat. Paris*, 27: 549 (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), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)* (& as *D. tenuiculum*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Australia. **Basionym or Replaced Name:** *Andropogon sericeus* R. Br., *Prodr.* 201 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *R. Brown 6178 [excluding part A]*, Australia: New South Wales: Paterson River (BM (photo, BRI, K); ILT: BRI (fragm. ex K), E (photo, BRI, K), K (photo, BRI)). LT designated by Blake, *Proc. Roy. Soc. Queensland* 80: 67 (1969).

Illustrations (Books): E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (64, Pl. 21), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (517, Fig. 442 & 518, Fig. 443 as subspecies *sericeum* & *humilius*), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (331, Pl. 92 as *D. superciliatum*), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1146, Fig. 329 as subsp.

humilius), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (207), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (186 & 188(3)(4) as *D. tenuiculmum*), 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) (638), F.W.Gould, *The Grasses of Texas* (1975) (588, Fig. 310).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.Domin, *Bibliotheca Botanica* 85 (1915) (268, Fig.63 as *Andropogon superciliatus*).

Derivation (Clifford & Bostock 2007): *L. sericus*, silken; -ea, indicating resemblance. Densely invested in part or totally with long hairs.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, of moderate stature, 30–80 cm long, 4-noded. Culm-internodes channelled. Culm-nodes bearded. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blades 8–15 cm long, 2–4 mm wide, mid-green or glaucous. Leaf-blade midrib evident. Leaf-blade surface glabrous or pilose, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–6, single or paired or digitate, 4–7 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs lengthening towards internode tip, 1–1.5 mm long. Rhachis internodes linear, 2 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2 mm long, without a translucent median line, ciliate, hairy all along but hairs longer above, with 1–1.5 mm long hairs.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–6 in number, barren, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, containing empty lemmas, obovate, 3 mm long, shorter than fertile, separately deciduous. Companion sterile spikelet glumes 8-veined, ciliate on margins. Companion sterile spikelet lemmas enclosed by glumes, 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 oblong, dorsally compressed, 4 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached transversely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, much thinner above, without keels, keel-less except near apex, 6–8-veined. Lower glume surface flat or concave, tuberculate (along fringe), pubescent, hairy below, with a transverse fringe of hair. Lower glume margins ciliate. Lower glume hairs 5–6 mm long. Lower glume apex truncate or obtuse. Upper glume lanceolate, 1-keeled, 3-veined. Upper glume apex erose, truncate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or ovate, 1.5–2.5 mm long, hyaline, obtuse or acute. Fertile lemma linear, hyaline, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex entire, awned, 1-awned. Principal lemma awn apical, geniculate, 25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

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

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia, Papuasias.** Lesser Sunda Is, Philippines. New Guinea PNG. New Guinea, Solomon Is. **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania. **North-central Pacific.** New Caledonia. Marquesas. Hawaii (*). **South-central USA, Southeastern USA, Mexico.** Texas. Florida. Northeast Mexico, Northwest Mexico, Southwest Mexico.

TDWG4. 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. Tamaulipas. Sonora. Campeche.

Dichanthium setosum S. T. Blake. *Univ. Queensl. Papers, Dept. Biol.*, 2 No. 3, 50 (1944).

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: New South Wales: ... Moray ... 16 miles E. of Guyra, *Mckie 310* (T: BRLNSW).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (207), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (188(2)), 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. seta, bristle; -osa, abundance. Each raceme subtended by a stout bristle.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–70 cm long, 2–4 -noded. Culm-internodes channelled. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5–0.75 mm long, truncate. Leaf-blades 7–15 cm long, 2–3.5 mm wide. Leaf-blade surface scaberulous or scabrous, glabrous or pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2(–3), single or paired, 3.5–8 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs lengthening towards internode tip, 1–2.5 mm long. Rhachis internodes linear, 2 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, 2 mm long, without a translucent median line, ciliate, hairy all along but hairs longer above, with 1–2.5 mm long hairs.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–4 in number, male, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, male, elliptic, 5–5.5 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes 9 -veined, villous. Companion sterile spikelet lemmas enclosed by glumes, 0.5–2.7 mm long, dentate, 1-awned, with 0.5–6 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 oblong, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely. Spikelet callus hairs 0.5–0.9 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, much thinner above, purple, without keels, keel-less except near apex, 8–9 -veined. Lower glume surface tuberculate (along fringe), pilose, hairy generally, with a transverse fringe of hair. Lower glume margins ciliate. Lower glume hairs 2–3.5 mm long. Lower glume apex truncate or obtuse. Upper glume lanceolate, 1-keeled, 3 -veined. Upper glume surface scabrous, rough on veins.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 2 mm long, hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 25 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 2–2.2 mm long. Caryopsis with adherent pericarp, obovoid, 3 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, Tasmania.

TDWG4. North, Central, South East. Coast, Tablelands, Western Slopes, Western Plains.

Dichanthium tenue (R.Br.) A. Camus. *Bull. Mus. Hist. Nat. Paris*, 27: 549 (1921).

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

TYPE from Australia. **Basionym or Replaced Name:** *Andropogon tenuis* R. Br., *Prodr.* 201 (1810). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: (T.) Littora Novae Hollandiae intra tropicum.,.

Illustrations (Books): C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (331, Pl 97 as *D. humilium*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (208), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (188(8)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. thin. Culms, leaf-blades or pedicels, slender.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–70 cm long, 2–4 -noded. Culm-internodes channelled. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5–0.75 mm long, truncate. Leaf-blades 7–15 cm long, 2–3.5 mm wide. Leaf-blade surface scaberulous or scabrous, glabrous or pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or paired or digitate, 3–6 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis hairs lengthening towards internode tip, 1–1.5 mm long. Rhachis internodes linear. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, without a translucent median line, ciliate, hairy all along but hairs longer above, with 1–1.5 mm long hairs.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–4 in number, barren, smaller than fertile. Basal sterile spikelet lemmas awnless.

Companion sterile spikelets well-developed, male, elliptic, 4–6 mm long, as long as fertile, separately deciduous. Companion sterile spikelet glumes 9 -veined, ciliate on margins. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 4–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pilose, base obtuse, attached transversely. Spikelet callus hairs 0.5–0.9 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, chartaceous, of similar consistency above, without keels, keel-less except near apex, 8–9 -veined. Lower glume surface smooth or asperulous. Lower glume margins ciliolate. Lower glume apex truncate or obtuse. Upper glume lanceolate, 1-keeled, 3 -veined.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, hyaline. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 22–28 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, oblong, 2.5 mm long.

Distribution (TDWG). Continent. Australasia, Pacific.

Country /Province /State. Australia. Queensland, New South Wales. **North-central Pacific.** Tonga (*). Hawaii (*).

TDWG4. North, Central, South East. Coast, Tablelands.

Dichanthium tuberculatum (Hack.) T.A. Cope. *Kew Bull.*, 35(3): 703 (1980).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960) (as *Eremopogon*).

TYPE from India. **Basionym or Replaced Name:** *Andropogon tuberculatus* Hack., *Monogr. Phan.* 6: 404 (1889). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *C.E.O. Kuntze s.n.*, 25 1875, India: prope Assirgar (W; IT: US-76241 (fragm. ex W)).

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

Derivation (Clifford & Bostock 2007): *L. tuberculus*, wart; -ata, possessing. Lemmas or glumes bearing wart-like projections.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe **ANDROPOGONINAE**.

Habit, Vegetative Morphology. Perennial. Culms erect, 100–150 cm long, wiry. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface. Leaf-sheath auricles erect. Ligule a ciliolate membrane, 4–6 mm long, acute. Leaf-blades 20–40 cm long, 4–6 mm wide, stiff, glaucous. Leaf-blade midrib widened. Leaf-blade surface ribbed, scabrous, rough on both sides, glabrous. Leaf-blade margins scabrous.

Inflorescence. Synflorescence compound, linear, 20–35 cm long.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spatheole linear. Racemes 1, single, 2.5–3 cm long. Rhachis fragile at the nodes, subterete, ciliate on margins. Rhachis internodes filiform. Rhachis internode tip flat. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, filiform, without a translucent median line, ciliate.

Sterile Spikelets. Companion sterile spikelets well-developed, male, lanceolate, 5 mm long, as long as fertile. Companion sterile spikelet glumes tuberculate. Companion sterile spikelet lemmas enclosed by glumes, muticous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus pubescent, base obtuse, attached obliquely.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, chartaceous, without keels, 5–7 -veined. Lower glume surface flat, tuberculate, rough on veins. Lower glume apex obtuse. Upper glume lanceolate, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline, 0 -veined, without midvein, without lateral veins. Fertile lemma linear, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex entire, awned, 1 -awned. Principal lemma awn apical, geniculate, 16–18 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 2 mm long.
Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Indian Subcontinent. India.
TDWG4. Madhya Pradesh.

Dichelachne crinita (L.f.) Hook. f. *Fl. N. Zel.* 1: 293 (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), 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)*, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from New Zealand. **Basionym or Replaced Name:** *Anthoxanthum crinitum* L. f., *Suppl. Pl.* 90 (1781 [1782]). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Forster s.n.*, New Zealand (S-herb. Bdck).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (216, Fig 161), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (153, Pl 46), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (494, Fig 96), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (209), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (190), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (213 & 219, Fig 29 & 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. with long hair. Hairy as of leaf-blades or awns invested in long weak hairs.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Ligule an eciliate membrane, 1 mm long. Leaf-blades 10–20 cm long, 3–5 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 8–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 5 mm long, 1.25 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, 4 mm long, cartilaginous, keeled, lightly keeled, 1 -veined, 0–3 -veined, one-veined. Lemma margins involute. Lemma apex obtuse (easily splitting), awned, 1 -awned. Principal lemma awn dorsal, arising 0.5–0.66 way up back of lemma, flexuous, 20–25 mm long overall, 4–6 length of lemma. Palea 0.75 length of lemma, 2 -veined. Palea keels approximate.

Flower and Fruit. Anthers 2, 0.5 mm long. Caryopsis with adherent pericarp. Endosperm liquid.

$2n = 70$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe (*), Tropical Asia, Australasia, Pacific.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia, Papuaasia.** New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **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, Stewart Is. **South-central Pacific, North-central Pacific.** Niue. Easter Is, Tubuai Is. Hawaii.

TDWG4. South-West. Southern. Central, South East, Inland. Coast, Tablelands, Western Slopes.

Dichelachne hirtella N.G. Walsh. *Muelleria*, 7(4): 455 (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, Mt. Arapiles: *Beaglehole* 29609 (MEL holo).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (494, Fig 96), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (209), A.Wilson (ed.), *Flora of*

Australia, Vol 44A. *Poaceae* (2009) (219, Fig 30), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. hirtus*, hairy; -ellus, diminutive. Plants with slightly hairy leaves or spikelets.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Annual or perennial, caespitose. Culms erect, 30–60(–150) cm long. Ligule a ciliolate membrane, 1–1.5 mm long, truncate. Leaf-blades flat or conduplicate, 7–15 cm long, 1–4 mm wide. Leaf-blade surface smooth or scaberulous, glabrous or puberulous.

Inflorescence. Inflorescence a panicle. Peduncle 25–55 cm long. Panicle spiciform, linear, (6–)8–15(–25) 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, laterally compressed, 6.5–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose. Floret callus hairs 1–1.8 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 6.5–10 mm long, 1 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 6.5–10 mm long, 1–1.2 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma linear, 6–8 mm long, cartilaginous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma surface puberulous. Lemma margins involute. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn subapical, geniculate, (15–)20–26(–30) mm long overall, with twisted column. Column of lemma awn puberulous, with 0.3 mm long hairs. Palea linear, 4.5–6.5 mm long. Palea surface glabrous or pubescent, hairy on back or on margins.

Flower and Fruit. Lodicules 2, membranous. Anthers 2–3, 0.5 mm long or 1–1.5 mm long, retained within floret or eventually exerted. Caryopsis with adherent pericarp. Hilum linear.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, A.C.T., Victoria.

TDWG4. Southern. Tablelands, Western Slopes.

Dichelachne inaequiglumis (Hack. ex Cheesem.) E. Edgar & H.E. Connor. *New Zealand J. Bot.*, 20(3): 307 (1982).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. **Basionym or Replaced Name:** *Dichelachne sciurea* var. *inaequiglumis* Hack. ex Cheeseman, *Man. New Zealand Fl.* 874 (1906). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. Petrie s.n. [1068 to Hackel]*, Dec 1895, New Zealand: vicinity of Auckland, Western Park (W-26408; IT: CHR).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (217, Fig 162), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (494, Fig 96), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (209), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (219, Fig 30), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms 25–70 cm long. Culm-internodes smooth or scaberulous, distally glabrous. Culm-nodes purple. Lateral branches lacking. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule a ciliolate membrane, 0.1–0.5 mm long, scaberulous on abaxial surface. Leaf-blades 7–15 cm long, 1–2.5 mm wide. Leaf-blade surface scabrous, rough adaxially or on both sides.

Inflorescence. Inflorescence a panicle. Peduncle 25–55 cm long. Panicle open, ovate, 10–30 cm long, 4–8 cm wide. Primary panicle branches whorled at most nodes. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scaberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension or with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent. Floret callus hairs 1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 3–3.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 4–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–6 mm long, cartilaginous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma margins involute. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn subapical, flexuous, 13.5–18.5 mm long overall. Palea linear, 3.5–4 mm long. Palea keels scaberulous. Palea apex ciliate. Rhachilla extension 0–0.2 mm long.

Flower and Fruit. Lodicules 2, cuneate, 0.4–0.7 mm long, membranous. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, sulcate on hilar side, 2–2.5 mm long. Embryo 0.1–0.2 length of caryopsis. Hilum linear, 0.8 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand. South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I.

TDWG4. Southern. South East. Coast, Tablelands, Western Slopes.

Dichelachne lautumia E.Edgar & H.E.Connor. *New Zealand J. Bot.*, 37(1): 67 (1999).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from New Zealand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: New Zealand: Flaxbourne River, Marlborough, north side, near mouth, disused limestone quarry, 100 m, 4 Dec 1997, G. Jane s.n. (HT: CHR-514885C; IT: CHR-514885B, CHR-514885A).

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

Derivation (Clifford & Bostock 2007): *L. lautumia*, quarry. The first collected was from a disused limestone quarry.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms 45–60 cm long. Culm-nodes green or purple, pubescent. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined. Ligule a ciliate membrane, 0.7–1 mm long, scaberulous on abaxial surface, erose, truncate. Leaf-blades 6–20 cm long, 1.5–3 mm wide, grey-green. Leaf-blade surface ribbed, grooved adaxially, scabrous, rough adaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 10–16 cm long, 1–1.5 cm wide. Primary panicle branches bearing spikelets almost to the base. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets laterally compressed, 6–8 mm long, breaking up at maturity. Floret callus evident, bearded. Floret callus hairs 4 mm long.

Glumes. Glumes similar. Lower glume lanceolate or elliptic, 3–6 mm long, 1 -veined. Lower glume primary vein scabrous. Lower glume apex acuminate. Upper glume lanceolate or elliptic, 3–6 mm long, 1 -veined. Upper glume primary vein scabrous. Upper glume apex acuminate.

Florets. Fertile lemma 6–7 mm long, cartilaginous. Lemma surface papillose, rough above. Lemma apex dentate, 2 -fid, with lobes 0.5–1 mm long, acuminate, awned, 1 -awned. Principal lemma awn dorsal, arising 0.5 way up back of lemma, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn hirsute. Palea keels scabrous. Palea surface pilose, hairy above. Rhachilla extension 0.5 mm long.

Flower and Fruit. Lodicules 2, cuneate, 0.5 mm long, ciliate. Anthers 3, 1–1.5 mm long. Caryopsis 3.5 mm long. Embryo 0.15 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. New Zealand. New Zealand South I.

Dichelachne micrantha (Cav.) Domin. *Biblioth. Bot.* 1, 5: 353 (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), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Australia. **Basionym or Replaced Name:** *Stipa micrantha* Cav., *Icon.* 5: 42, 467, f.2 (1799). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L. Nee* s.n., Apr 1793, Australia: [Botany Bay] (MA; IT: L).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (217, Fig 163), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (494, Fig 96), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (210), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983), 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. mikros, small; anthos, flower. Spikelets small.

Classification. Subfamily Pooideae. Tribe: Poaeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–110 cm long, wiry. Culm-internodes smooth or scaberulous, distally glabrous. Lateral branches lacking. Ligule an eciliate membrane, 0.3–1(–1.5) mm long. Leaf-blades 10–23 cm long, 2–5 mm wide.

Inflorescence. Inflorescence a panicle. Peduncle 20–45 cm long. Panicle contracted, linear, continuous or interrupted, 10–19 cm long, 2–3.5 cm wide. 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, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.2–0.5 mm long, pubescent. Floret callus hairs 0.35–0.75 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 3–5 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 3–5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 2.75–4.5 mm long, cartilaginous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma surface asperulous. Lemma margins involute. Lemma apex obtuse (easily splitting), awned, 1 -awned. Principal lemma awn dorsal, arising 0.75 way up back of lemma (0.5–1mm below apex), flexuous, 10–17 mm long overall, 3.5–5 length of lemma. Palea 0.25–3 mm long, 0.75 length of lemma, 2 -veined. Palea keels approximate.

Flower and Fruit. Lodicules 2, 0.2–0.6 mm long, glabrous or ciliate. Anthers 1 or 3, 1–1.75 mm long, pallid or yellow or purple. Caryopsis with adherent pericarp, sulcate on hilar side, 2.25–4.45 mm long, apex rostrate. Hilum punctiform. Endosperm liquid.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia, New Zealand.** Western Australia, South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania, Lord Howe-Norfolk Is. New Zealand North I. **South-central Pacific, North-central Pacific.** Easter Is, Tubuai Is. Hawaii. **Southern South America.**

TDWG4. South-West. Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Dichelachne montana Endl. *Fl. Norfolk*. 20 (1833).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (210).

Classification. Subfamily Pooideae. Tribe: Poaeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–70 cm long. Lateral branches lacking. Ligule an eciliate membrane, 0.8–1.4 mm long. Leaf-blades 7–14 cm long, 1.5–3 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 4–11 cm long, 0.5–1 cm wide. Spikelets solitary. Fertile spikelets pedicelled.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.2–0.3 mm long, pubescent. Floret callus hairs 0.4 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 3.4 mm long, 0.9 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume lanceolate, 3.8–4 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

Florets. Fertile lemma elliptic, 3–3.5 mm long, cartilaginous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex obtuse, awned, 1 -awned. Principal lemma awn subapical or

dorsal, arising 0.75–0.9 way up back of lemma, geniculate, 5–8 mm long overall, with a straight or slightly twisted column. Palea 2.4–2.6 mm long.

Flower and Fruit. Anthers 3, 0.4–0.5 mm long. Caryopsis with adherent pericarp, 2.8–3.2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales, Victoria, Tasmania. South East. Coast, Tablelands.

Dichelachne parva B.K. Simon. *Austrobaileya*, 1(5): 462 (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: LT: *Blake 4600*, Australia: Queensland: near Wyberba (BRI-61721 left-hand specimen). LT designated by Jacobs et al., *Telopea* 5: 325–326 (1993).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (210), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. small. Of dwarf stature.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 15–35 cm long, 2-noded. Culm-internodes smooth or scaberulous, distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades 4–8 cm long, 1 mm wide. Leaf-blade surface glabrous or puberulous, hairy abaxially.

Inflorescence. Inflorescence a panicle, comprising 15–30 fertile spikelets. Peduncle 25–55 cm long. Panicle open, ovate, 3–8 cm long, 1–2 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent. Floret callus hairs 0.5–1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 3.5–5.5 mm long, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, keeled above, 1-veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3.5–5.5 mm long, 1 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, keeled above, 1-veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3.5–4.5 mm long, cartilaginous, keeled, lightly keeled, 5-veined, more than 3-veined. Lemma margins involute. Lemma apex acute, awned, 1-awned. Principal lemma awn subapical, flexuous, 10–15 mm long overall. Palea 3.5–4 mm long.

Flower and Fruit. Lodicules 2. Anthers 3, 0.25 mm long. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, 3 mm long, light brown.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. South East. Coast, Tablelands, Western Slopes.

Dichelachne robusta B.K.Simon. *Fl. Austral.* 44A: 386 (2009).

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

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 100–170 cm long. Lateral branches lacking. Ligule an eciliate membrane, 4–5 mm long. Leaf-blades 15–30 cm long, 2–5(–8) mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, 25–30 cm long, 5–16 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4.5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.4 mm long, pilose. Floret callus hairs 0.8–1.8 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 3.5–4 mm long, 0.75 length of upper glume, membranous, 1-keeled, keeled above, 1-veined.

Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 4.5–5.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–5 mm long, cartilaginous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma margins involute. Lemma apex awned, 1 -awned. Principal lemma awn subapical, geniculate, 10–13 mm long overall, with a straight or slightly twisted column. Palea 4.4–4.6 mm long.

Flower and Fruit. Anthers 3, 1.5–2 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, Victoria.

Dichelachne rara (R. Br.) Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 337 (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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Australia. **Basionym or Replaced Name:** *Agrostis rara* R. Br., *Prodr.* 171 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brown 6212*, Australia: (BM; IT: K).

Illustrations (Books): E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (65, Pl. 22 as *D. novoguineensis*), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (218, Fig. 164), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (494, Fig. 96), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (210), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (133, Fig. 20), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (219, 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. far apart. Spikelets far apart in panicle.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–130 cm long, wiry. Culm-internodes smooth or scaberulous, distally glabrous or pubescent. Lateral branches lacking. Ligule an eciliate membrane, 1–3 mm long. Leaf-blades 10–17(–25) cm long, 1–4.5 mm wide.

Inflorescence. Inflorescence a panicle. Peduncle 25–55 cm long. Panicle open, oblong, dense, 10–23 cm long, 4–8 cm wide. 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, laterally compressed, 4–8.25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent. Floret callus hairs 0.5–1.75 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate, 3.25–8.25 mm long, 1 length of upper glume, membranous, 1-keeled, keeled above, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute to attenuate. Upper glume lanceolate, 3.25–8.25 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, keeled above, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute to attenuate.

Florets. Fertile lemma lanceolate, 4–8 mm long, cartilaginous, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma surface asperulous. Lemma margins involute. Lemma apex obtuse (easily splitting), awned, 1 -awned. Principal lemma awn subapical or dorsal, arising 0.75–0.9 way up back of lemma (0.3–2mm below apex), flexuous, 10–25 mm long overall, 2–4 length of lemma. Palea 3–6.5 mm long, 0.75 length of lemma, 2–4 -veined. Palea keels approximate.

Flower and Fruit. Lodicules 2, 0.5–0.75 mm long, glabrous. Anthers 1 (rarely) or 3, 0.75–2.75 mm long, yellow or purple. Caryopsis with adherent pericarp, sulcate on hilar side, 2.5–3.25 mm long, apex rostrate. Hilum punctiform. Endosperm liquid.

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

Country /Province /State. Malesia, Papuasia. Lesser Sunda Is. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Australia, New Zealand.** South Australia, Queensland, New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I.

TDWG4. Southern. Central, South East. Coast, Tablelands, Western Slopes.

Dichelachne sieberiana Trin. & Rupr. *Mem. Acad. Petersb. Ser.* 6, 5 *Sc. Nat.* 5:2 (1842).

Regarded by K as a synonym (*D. rara*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.W. Sieber 63*, no date, Australia: New South Wales (LE; IT: BM, K, L, P, US-993643).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (494, Fig 96), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (211), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Franz Wilhelm Sieber (1789–1844) Bohemian botanist and traveller.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms 40–90 cm long. Culm-internodes distally pubescent. Culm-nodes pubescent. Leaf-sheaths pubescent. Ligule a ciliate membrane, 1–1.5 mm long, scaberulous on abaxial surface or pubescent on abaxial surface, truncate. Leaf-blades 7–15 cm long, 1–1.5 mm wide, stiff. Leaf-blade surface scabrous, rough abaxially, pubescent, hairy on both sides. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle 25–55 cm long. Panicle open, lanceolate, 12–25 cm long, bearing few spikelets. Primary panicle branches spreading. Panicle axis scabrous. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, scabrous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 4–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pilose. Floret callus hairs 1–1.5 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, gaping. Lower glume lanceolate or elliptic, 3.5–5 mm long, 0.8–0.9 length of upper glume, hyaline, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or elliptic, 4–6 mm long, 1 length of adjacent fertile lemma, hyaline, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4–6 mm long, cartilaginous, much thinner above, keeled, lightly keeled, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma margins involute. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn subapical, bigeniculate, 10–15 mm long overall. Palea linear, 3.5–5.5 mm long. Palea keels scabrous, adorned above. Palea apex ciliate. Rhachilla extension 0.2–0.5 mm long.

Flower and Fruit. Lodicules 2, elliptic or oblong, 0.5–0.7 mm long, membranous, glabrous. Anthers 3, 0.4–0.6 mm long or 0.9–2.8 mm long, retained within floret or eventually exerted. Caryopsis with adherent pericarp, 2.5–2.9 mm long. Embryo 0.2 length of caryopsis. Hilum linear, 0.8–0.9 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia, New Zealand. New South Wales, A.C.T., Victoria, Tasmania. New Zealand North I, New Zealand South I.

TDWG4. Coast, Tablelands, Western Slopes.

Dielsiochloa floribunda (Pilger) Pilger. *Engl. Bot. Jahrb.* 73: 99 (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 Peru. **Basionym or Replaced Name:** *Trisetum floribundum* Pilg., *Bot. Jahrb. Syst.* 37: 505 (1906)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Weberbauer 2811 Apr 1903*, Peru: Ancachs: Gajatambo: in jugo Chonta in montibus Cordillera Negra dicta supra Ocos, eodem solo, 4500–4800 m, Peru: Ancachs: Gajatambo, in jugo Chonta in montibus Cordillera

ST: *Weberbauer 1028*, May 1902, Peru: Sandia: unterhalb Ananca, auf sehr durftig bewachsenem, steinigem Boden, 4800 m (B).

ST: *Weberbauer 2811*, Apr 1903, Peru: Ancachs: Gajatambo: in jugo Chonta in montibus Cordillera Negra dicta supra Ocos, eodem solo, 4500–4800 m (B).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 40), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (235, Fig. 72).

Illustrations (Journals): *Ruizia* (13:160, Fig 17f-h (1993)).

Derivation (Clifford & Bostock 2007): L. floreo, bloom; -bunda, indicating action. Inflorescence of many flowers.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms 6–30 cm long. Ligule an eciliate membrane. Leaf-blades filiform, convolute, 3–8 cm long, 0.5–1.5 mm wide. Leaf-blade surface pubescent, hairy adaxially.

Inflorescence. Inflorescence a panicle, shorter than basal leaves, embraced at base by subtending leaf. Panicle contracted, oblong, 3–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, tip pyriform.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 10–20 mm long, breaking up at maturity, disarticulating above glumes but not between florets. Rhachilla internodes zig-zag, 1.3–1.8 mm long, eventually visible between lemmas.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 7–8 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 8.5–9.5 mm long, 0.8–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 8–11 mm long, membranous, keeled, 5 -veined, more than 3-veined. Lemma surface scaberulous. Lemma apex lobed, 2 -fid, with linear lobes, incised 0.2 of lemma length, awned, 1 -awned. Principal lemma awn dorsal, arising 0.66 way up back of lemma, straight, 6–10 mm long overall. Palea gaping, linear, 2 -veined. Palea keels scaberulous. Palea surface papillose. Palea apex acuminate. Apical sterile florets 4–7 in number, barren, linear, 5–8 mm long. Apical sterile lemmas dentate, 2 -fid, awned, 1 -awned. Apical sterile lemma awns 5–8 mm long.

Flower and Fruit. Anthers 2–3, 0.75 mm long. Ovary glabrous. Caryopsis with adherent pericarp, lanceolate, dorsally compressed, 4 mm long, glabrous. Embryo 0.15 length of caryopsis. Hilum linear, 0.66 length of caryopsis. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia, Peru. Argentina Northwest, Chile North.

TDWG4. Jujuy, La Rioja. Tarapaca, Antofagasta.

Digitaria abludens (R. & S.) Veldkamp. *Blumea*, 21 (1): 53 (1973).

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 *D. granularis*).

TYPE from India. **Basionym or Replaced Name:** *Panicum abludens* Roem. & Schult., *Syst. Veg.* 2: 457 (1817)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India:, *B. Heyne s.n.* (HT: B; IT: BM) "*Panicum paradoxum* Roth, nov. plant. Spec. Ms. ...".

Recent Synonyms: *Digitaria granularis* (Trin.) Henrard, *Monogr. Gen. Digitaria*, 302 (1950).

Illustrations (Books): K.M.Matthew, *Flora Palni Hills* (1996) (814, Pl. 814), H.J.Noltie, *The Grasses of Bhutan* (2000) (733, Fig. 45), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 759).

Derivation (Clifford & Bostock 2007): *L. abludo*, be unlike. Differing markedly from related species.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 30–60 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long, truncate or obtuse. Leaf-blades linear or lanceolate, 7–8 cm long, 3 mm wide, flaccid. Leaf-blade surface scaberulous, rough on both sides, glabrous, hairless except near base. Leaf-blade margins scaberulous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, unilateral, 6–7 cm long. Central inflorescence axis 1–4 cm long. Rhachis angular, scabrous on margins. Spikelet packing lax. Spikelets spreading, in pairs or in threes. Fertile spikelets pedicelled, 2 in the cluster or 3 in the cluster. Pedicels present, filiform, scabrous, 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 elliptic, dorsally compressed, acute, 1.3–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure. Upper glume lanceolate, 0.66 length of spikelet, membranous, 3–5 -veined. Upper glume surface pubescent, hairy between veins, with capitate 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, 5(–7) -veined, pubescent, hairy between veins, with capitate hairs, obtuse. Fertile lemma elliptic, 1.3–1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.4 mm long. Caryopsis with adherent pericarp.

$N = 18$ (1 ref TROPICOS).

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

Country /Province /State. China. China South Central, Hainan, China Southeast. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Assam, Bangladesh, Eastern Himalaya, India, Nepal, Pakistan, West Himalaya. Laos, Myanmar, Thailand. Java, Lesser Sunda Is, Malaya, Philippines, Sulawesi. New Guinea PNG. New Guinea. **Brazil.** Brazil Northeast.

TDWG4. Henan. Yunnan. Bhutan. Kerala. Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe.

Digitaria abyssinica (A.Rich.) Stapf. *Kew Bull.* 1907, 213 (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), D.Sharp, D. & B.K.Simon, *AusGrass* (2002), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Ethiopia. **Basionym or Replaced Name:** *Panicum abyssinicum* Hochst. ex A. Rich., *Tent. Fl. Abyss.* 2: 360–361 (1850). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: W. Schimper *U. i. 1840 Sect. primo*, 82, 22 Sep 1837, Ethiopia: in fruticetis opacis ad radices septentrionalis montis scholoda (P; IT: BR, K, L, US-1645178S, US-3298785, US-1063861 (ex B), US-945058 (ex BM), WAG).

Recent Synonyms: *Digitaria scalarum* (Schweinf.) Chiov., *Restdt. Sc. Miss. Stefan.-Paoli Somal. Ital.* 1: 225 (1916).

Illustrations (Books): R.M.Phillips, F.T.E.A., *Gramineae* (3(1982):642, Fig 147), G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (255, Fig 102), 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) (375), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (179, Fig 58), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 126, Fig. 6 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (1 & as *D. eichingeri*, *D. hackelii*, *D. lemeana*, *D. merkeri*, *D. somalensis*, *D. tararensis*).

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

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

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated. Butt sheaths glabrous or pubescent or villous. Culms decumbent or rambling, weak, 5–60 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 2–12 cm long, 3–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–25, borne along a central axis, unilateral, 2–11 cm long. Central inflorescence axis 1–9 cm long. Rhachis wingless or narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, free or fused to each other, united below, 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, compressed slightly, 1.5–2.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume ovate or oblate, 0.1–0.8 mm long, 0.1–0.2 length of spikelet, membranous, without keels, 0–1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 0.66–1 length of spikelet, membranous, without keels, 3–7 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, 7 -veined, glabrous, obtuse. Fertile lemma elliptic, 1.5–2.5 mm long, cartilaginous, much thinner on margins, grey or light brown or purple, without keel. Lemma margins flat, covering most of palea. Lemma apex obtuse. Palea cartilaginous.

Flower and Fruit. $2n = 18$ (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, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Middle Atlantic ocean, Western Indian ocean. Nigeria. Cameroon, Gabon, Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia, Zimbabwe. Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape. Madagascar, Seychelles. **Arabian Peninsula.** Saudi Arabia, Yemen. **Indian Subcontinent.** India, Sri Lanka. **Australia.** Queensland (*). **North-central Pacific.** Hawaii (*). **Mexico.** Gulf (Mexico). **Mesoamerica, Western South America.** Costa Rica, Honduras. Ecuador.

TDWG4. South East. Veracruz.

Digitaria acuminatissima Stapf. Prain, *Fl Trop. Afr.* 6: 441 (1919).

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: LT: *Dalziel* 907, Nigeria: Abinsi (K). LT designated by Henrard, *Monogr. Digitaria* 6 (1950).

ST: *Chevalier* 2218, Mali (K, P).

ST: *Chevalier* 2284, Mali (K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (6 & 7 subv. *grandiflora*).

Derivation (Clifford & Bostock 2007): *L. acumen*, sharp point; -ata, possessing; -issima, most. Spikelets acuminate in outline.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, robust, 60–120 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 3–25 cm long, 3–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–20, digitate or borne along a central axis, straight, unilateral, 7–25 cm long. Central inflorescence axis 1–10 cm long. Rhachis broadly winged, with sharp-edged midrib. Spikelet packing 0.66 their length apart. 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 lanceolate or elliptic, dorsally compressed, acuminate, 2.5–4 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.4 mm long, 0.05–0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.33–0.5 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, 7 -veined, with equidistant veins, scaberulous, rough on veins, pubescent or setose (sometimes), acuminate. Fertile lemma lanceolate, 2.3–3.5 mm long, cartilaginous, much thinner on margins, pallid or grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. *N* = 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, Southern Africa. Ghana, Mali, Mauritania, Nigeria. DRC. Somalia. Tanzania. Mozambique, Zambia, Zimbabwe. Namibia, Botswana.

Digitaria adamaouensis A.P.M. van der Zon. *Wageningen Agric. Univ. Pap.*, 92(1:2): 557, 327 (1992).

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

TYPE from Cameroons. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Cameroun: Tello, 43 km E of Ngaoundere, plateau de l'Adamaoua, 1200 m alt., 11 Aug 1981, *Van der Zon 1247* (HT: WAG; IT: GAR, P, YA).

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

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Adamaou, Republic of Cameroon.

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

Habit, Vegetative Morphology. Annual. Butt sheaths glabrous. Culms geniculately ascending, 80–110 cm long. Culm-internodes distally glabrous or hirsute. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blades 8–12 cm long, 3–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 5–12, borne along a central axis, unilateral, 4–7 cm long. Central inflorescence axis 8.5–11 cm long. Rhachis wingless, angular. Spikelet packing lax. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 1–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 1.9–2.1 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.7 mm long, 0.33 length of upper glume, membranous. Lower glume apex truncate to acute. Upper glume oblong, 0.9 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, acute. Fertile lemma elliptic, 1.9–2.1 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. Cameroon.

Digitaria aequatoriensis (Hitchc.) Henrard. *Meded. Herb. Leid. No.* 61, 5 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Syntherisma aequatoriensis* Hitchc., *Contr. U.S. Natl. Herb.* 24(8): 426 (1927)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 19949, 20 Jun 1923, Ecuador: Guayas: among brush, at Guayaquil (US-1164906).

Illustrations (Books): S.A.Renouze, *The Grasses of Bahia*, 1984 (254, Fig. 95), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (25).

Illustrations (Journals): *Ruizia* (13:399 Fig 53m-o (1993)).

Derivation (Clifford & Bostock 2007): L. aequator, equator; -ensis, denoting origin. Growing near the equator in Ecuador.

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

Habit, Vegetative Morphology. Perennial. Rootstock evident. Butt sheaths pubescent. Culms erect or geniculately ascending, 60–175 cm long. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2 mm long, erose. Leaf-blades lanceolate, 3.5–22 cm long, 4–21 mm wide. Leaf-blade surface glabrous or pubescent, hairy on both sides. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 8–25, digitate or borne along a central axis, the lowest whorled, unilateral, 3–20 cm long. Central inflorescence axis 1.5–16 cm long. Rhachis angular, scabrous on margins. Raceme-bases brief, pubescent. 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 elliptic, dorsally compressed, 2.5–3.5 mm long, with hairs extending 0.5 mm beyond apex, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.1–0.2 length of spikelet. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose, hairy between veins. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, villous, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 3 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Ecuador, Peru. Brazil Northeast.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe.

Digitaria aequiglumis (Hack. & Arech.) Parodi. *Rev. Fac. Agron. Vet. Buenos Aires*, 4: 47 (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), E.Edgar, & H.Connor, *Flora of New Zealand Gramineae* 5 (2000).

TYPE from Uruguay. **Basionym or Replaced Name:** *Panicum aequiglume* Hack. & Arechav., *Anales Mus. Nac. Montevideo* 1: 113 (1894). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: J. Arechavaleta s.n. (*Herb. Hackel 22880*), Uruguay: Campos del Uruguay (W; IT: BAA (fragm. ex W), MVFA (fragm. ex W), SI (fragm. ex W & photo)).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (213), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (459, Fig. 162), L.B.

Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (883, Fig. 180), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (363, Fig. 151 & as var. *aequiglumis, laetevirens*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (482, Fig. 124 var. *laetevirens*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (81, Fig. 20 & as var. *laetevirens*), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (304, Fig. 128), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (28 & 371 as *D.campestris, D. laetevirens*).

Illustrations (Journals): *Darwiniana* (19: 143, Fig. 22 (1974)).

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

Derivation (Clifford & Bostock 2007): L. aequus, equal; gluma, husk. Glumes subequal.

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–40 cm long, 2–4 -noded, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths keeled. Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades 4–8 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, exerted or embraced at base by subtending leaf. Racemes 3–5, digitate, erect or ascending, flexuous, unilateral, 5–8 cm long. Rhachis narrowly winged, angular. Spikelet packing crowded. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acuminate, 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, 5 -veined. Upper glume surface pubescent, hairy between veins. 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 equidistant veins, pubescent, hairy between veins or between veins but central interspaces glabrous, acute. Fertile lemma elliptic or oblong, 2.5–3 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute or apiculate. Palea cartilaginous.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia, New Zealand.** Western Australia (*), South Australia (*), New South Wales (*). New Zealand North I. **Western South America, Brazil, Southern South America.** Bolivia. Brazil West Central, Brazil North, Brazil Southeast, Brazil South. Argentina Northeast, Argentina Northwest, Chile Central, Paraguay, Uruguay.

TDWG4. South-West. Southern. Coast. Sao Paulo Parana, Catarina, Rio Grande do Sul. Catamarca, Jujuy, La Rioja, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe. Río Negro. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Maule, Biobio, La Araucania.

Digitaria andicola Gir.-Cañas. *Caldasia* 25(2): 211 (-216; figs. 1–2) (2003).

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

TYPE from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Colombia, Nemocon: Giraldo-Canas et al. 3319 (COL holo).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 15–35 cm long, 3 -noded. Culm-internodes 8 cm long, striate. Culm-nodes brown, glabrous. Lateral branches lacking. Leaf-sheaths 3–9 cm long, pilose, with tubercle-based hairs. Ligule an eciliate membrane or a ciliolate membrane, 0.5–2 mm long, erose. Leaf-blades 8–17 cm long, 1.5–4 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, single or paired or digitate, unilateral, 5–11 cm long. Central inflorescence axis 0–4.5 cm long. Rhachis angular, 0.4–0.6 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, filiform, 1–4 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 or ovate, dorsally compressed, acute, 2–2.5 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.8–1.5 mm long, 0.4–0.6 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous, with clavate hairs. Upper glume apex emarginate or obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, puberulous, acuminate. Palea of lower sterile floret 0.3–0.5 mm long. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Lodicules 2, cuneate, 0.25 mm long, membranous, truncate.

Distribution (TDWG). Continent. South America.

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

Digitaria andringitrensis A. Camus. *Bull. Soc. Bot. France* 73: 915 (1926).

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 l'andringitra, restes de forets detruites par les feux, vers 1,800 m. d'alt., *Perrier de la Bathie 14418* (HT: P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950).

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

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–50 cm long. Culm-internodes striate, distally glabrous. Leaf-sheaths striately veined, pilose. Ligule an eciliate membrane. Leaf-blades lanceolate, 5–6 cm long, 4–5 mm wide. Leaf-blade surface puberulous. Leaf-blade margins undulate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 7–8, digitate, erect, unilateral, 4–5 cm long. Central inflorescence axis 2.5–3 cm long. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. 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 lanceolate, dorsally compressed, compressed slightly, 3.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3 mm long, 0.1 length of spikelet, membranous, without keels. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 2.3 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous, with simple hairs. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, puberulous, acute. Fertile lemma elliptic, 2.5–2.7 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis with adherent pericarp, oblong, 2.5 mm long.

Distribution (TDWG). Continent. Africa.

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

Digitaria ammophila (Benth.) D. K. Hughes. *Kew Bull.* 1923, 313 (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 ammophilum* F. Muell., *Trans. & Proc. Victorian Inst. Advancem. Sci.* 1: 46 (1855), non Steud. (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mueller s.n.*, Dec 1858, Australia: on sandhills along the Murray River (MEL; IT: K).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (438, Fig 368), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (607, Fig 123), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (214), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(1)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (37).

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

Derivation (Clifford & Bostock 2007): Gk. ammos, sand; phileo, love. Growing in sandy habitats.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths villous. Culms erect or geniculately ascending, 15–60 cm long, 2–5 -noded. Culm-nodes glabrous or pubescent. Lateral branches sparse. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1–3 mm long, erose, obtuse. Leaf-blades 6–20 cm long, 3–7 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade margins entire or undulate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–15, borne along a central axis, the lowest whorled, spreading, flexuous, unilateral, 10–20 cm long. Central inflorescence axis 7–10 cm long. Rhachis angular, 0.6–0.7 mm wide. Spikelet packing distant. Raceme-bases filiform, 30–120 mm long. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 1 mm long or 3–4 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, dorsally compressed, 2.5 mm long, with hairs extending 0.5–1 mm beyond apex, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.2 length of spikelet, membranous, 0 -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 surface villous, hairy between veins. 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, villous, hairy between veins, acute. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

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. Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Western Slopes.

Digitaria angolensis Rendle. *Cat. Welw. Afr. Pl.* 2: 165 (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>: *fide* TROPICOS and Kew Synonymy Database: HT: *Welwitsch* 2790, Feb 1857, Angola: Pungo Andongo: damp meadows near Sansamanda (BM).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (783 & 804 as *D. verrucosa*, *D. yokoensis*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (72: 560 (2006)).

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

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

Habit, Vegetative Morphology. Annual. Culms geniculately ascending or decumbent, 20–120 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 2–20 cm long, 4–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–9, paired or digitate, unilateral, 3–20 cm long. Rhachis wingless, angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 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, dorsally compressed, 2–2.5 mm long, with hairs extending 0.2 mm beyond apex, 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 villous, with verruculose hairs. Upper glume hairs white or purple. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, villous (or central interspaces glabrous), with verruculose hairs, bearing white hairs or purple hairs, acute. Fertile lemma elliptic, gibbous, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, keeled. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa.** Burundi, DRC. Tanzania. Angola, Malawi, Zambia, Zimbabwe.

Digitaria ankaratrensis A. Camus. *Bull. Soc. Bot. France*, 72: 154 (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: LT: *Viguiier & Humbert 1614*, Nov 1912, Madagascar: prov. de Vakinankaratra, distr. de Betafo, pelouses rases prhs de Vavavata, vers 2000 m (P). LT designated (as type specimen) by Henrard, *Monogr. Digitaria* 41 (1950).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (373, Fig 139), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (41).

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

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

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms decumbent, 3–4 cm long. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane. Leaf-blades lanceolate, 0.3–0.5 cm long, 1.5–2 mm wide. Leaf-blade surface pubescent, sparsely hairy.

Inflorescence. Inflorescence composed of racemes or comprising only a few spikelets, comprising 2–5 fertile spikelets. Racemes 1, single, unilateral, 0.3–0.5 cm long, bearing few fertile spikelets, bearing 2–5 fertile spikelets on each. Rhachis angular. Spikelets appressed, 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, 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 ovate, 1 length of spikelet, membranous, without keels, 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, 7 -veined, glabrous, acute. Fertile lemma ovate, 1.4 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria appropinquata Goetghebeur. *Bull. Jard. Bot. Nation.Belg.*, 45(3–4): 402 (1975).

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

TYPE from Mozambique. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mozambique, Gurue: Torre 5162 (LISC holo, K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): L. appropinquo, approach. Similar to another species.

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

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect, slender, 15–20 cm long. Culm-nodes brown, glabrous. Leaf-sheaths smooth or scaberulous, hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1.5–3 mm long, truncate. Leaf-blades 3–6 cm long, 1–2 mm wide. Leaf-blade surface smooth or scaberulous, rough abaxially, pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or borne along a central axis, erect, unilateral, 1–4 cm long. Rhachis wingless, angular, 0.2 mm wide, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular or flattened, unequal, 1–3 mm long, scaberulous, tip rectangular.

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

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, mid-green or purple, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume oblong, 0.66 length of spikelet, membranous, mid-green or purple, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5(–7) -veined, with unevenly spaced veins, glabrous, acute. Fertile lemma lanceolate, 1.7–2 mm long, cartilaginous, much thinner on margins, purple, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria arenicola (Swallen) A. A. Beetle. *Leafl. West. Bot.* 6: 162 (1951).

Regarded by K as a synonym (*D. cognata*).

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:** *Leptoloma arenicola* Swallen, *Contr. Texas Res. Found., Bot. Stud.* 1(1): 1 (1950)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.R. Swallen 10122*, 24 Apr 1949, USA: Texas: Kenedy Co.: on sand hills 8.5 mi S of Sarita (US-1964088; IT: MO, US-1980070).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (363 & 587).

Illustrations (Journals): *Systematic Botany* (19: 621, Fig.2 (1994)).

Derivation (Clifford & Bostock 2007): *L. arena*, sandy place; *-cola*, dweller. Species of sandy habitats.

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

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA. Texas.

Digitaria argillacea (Hitchc. & Chase) Fernald. *Rhodora*, 22: 104 (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 Puerto Rico. **Basionym or Replaced Name:** *Syntherisma argillacea* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 18(7): 296 (1917)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 6221*, 20–23 Oct 1913, Puerto Rico: Monte Alegreillo, near Maricao (US-732423 (photo, L); IT: L (fragm. ex US), NY-71120).

Recent Synonyms: *Digitaria lecardii* (Pilger) Stapf, Prain, *Fl. Trop. Afr.* 9: 450 (1919).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (187, Fig 61), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 128, Fig. 7 & 130, Fig. 8 (2006) as var. *argillacea*, var. *nulliseta*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (322 & 384 as *D. hirtigluma*, *D. lecardii*).

Illustrations (Journals): *Darwiniana* (40: 176, fig.1. (2002) as var. *nulliseta*).

Derivation (Clifford & Bostock 2007): *L. argillos*, clay; *-acea*, resembling. Fertile florets dark-colored.

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

Habit, Vegetative Morphology. Annual. Culms erect, 30–60 cm long. Culm-nodes bearded. Ligule a ciliolate membrane. Leaf-blades 15–25 cm long, 3–4 mm wide, flaccid. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, erect, flexuous, unilateral, 10–15 cm long. Rhachis wingless, angular, 0.4–0.5 mm wide, puberulous on surface. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 6–12 mm long, 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, acute, 1.8–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent or setose, hairy on veins (setose). Upper glume hairs red. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pubescent or setose, bearing red hairs, acute. Fertile lemma ovate, 1.8–2 mm long, cartilaginous, much thinner on margins, black, shiny, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. **West tropical Africa, West-central tropical Africa, Northeast tropical Africa.** Benin, Burkina, Ghana, Ivory Coast, Mali, Nigeria. **Mexico.** Central Mexico, Northeast 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. Venezuela. Bolivia, Colombia, Ecuador, Peru.

TDWG4. Mexico State, Morelos. Guanajuato, Zacatecas. Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Digitaria argyrograpta (Nees) Stapf. Dyer, *Fl. Cap.* 7: 374 (1898).

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 argyrograptum* Nees, *Fl. Afr. Austr.* 27 (1841). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Ecklon s.n.*, South Africa: Cape: in alveo saxoso fluminis Zwartkopsrivier (Uitenhage) (B).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (416, Fig 346), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (47).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): Gk. argyreos, silver; grapho, draw. The upper glume and sterile lemma bear bands of silver hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 20–50 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 3–5 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, erect, unilateral, 5–10 cm long. Rhachis wingless, angular, 0.5 mm wide, scabrous on surface, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–3 mm long, scabrous, 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, 3.5–3.8 mm long, falling entire.

Glumes. Glumes two, 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 obtuse or acute. Upper glume oblong, 0.75–0.8 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 oblong, 1 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, pubescent, acute. Fertile lemma lanceolate, 3–3.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa, Western Indian ocean. Mozambique. Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Northern Cape, Western Cape, Eastern Cape. Madagascar.

Digitaria argyrotricha (Anderss.) Chiov. *Result. Sc Miss. Stefan-Paoli Somal Ital.* 1: 183 (1916).

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

Basionym or Replaced Name: *Panicum argyrotrichum* Andersson ex Peters *Naturw. Reise Mossambique* 548 (1864)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: "Standort: Auf feuchtem und trockenem sandigen Boden, Moorgrund, Marschland, an sussen Gewassern auf Wiesen. Auf den Querimbaseln und dem Festlande 12 [degr.] S.B., ... auf dem Festlande Cabaceira, bei der Insel Mossambique 15 [degr.] S.B., *Peters s.n. in 1842–48* see Notes.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (389, Fig 147), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (49).

Derivation (Clifford & Bostock 2007): Gk. argyreos, silver; thrix, hair. The upper glume and sterile lemma are densely covered with whitish-pink hairs.

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

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Stolons present. Culms geniculately ascending or decumbent, 30–70 cm long. Ligule an eciliate membrane. Leaf-blades lanceolate, 2–9 cm long, 2–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, unilateral, 6–16 cm long. Rhachis broadly winged, with rounded midrib. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic, dorsally compressed, 1.5–2.4 mm long, with hairs extending 0.2 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.1–0.3 mm long, 0.05–0.15 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume primary vein eciliate. Upper glume surface woolly, hairy between veins, with verruculose hairs. 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, woolly, hairy between veins, with verruculose hairs, acute. Fertile lemma elliptic, 1.5–2.4 mm long, cartilaginous, much thinner on margins, light brown (golden), without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Ghana. Somalia, Sudan. Kenya, Tanzania. Mozambique. Kwazulu-Natal. Madagascar.

Digitaria aridicola Napper. *Kirkia*, 3: 123 (1963).

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: Kenya, Voi: Sheldrick 12506 (EA holo, K).

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

Derivation (Clifford & Bostock 2007): *L. aridus*, dry; *-cola*, dweller. Growing in areas of low rainfall.

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

Habit, Vegetative Morphology. Perennial, caespitose. Stolons absent or present. Butt sheaths thickened and forming a bulb, pubescent or woolly. Culms decumbent, 30–100 cm long, wiry. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 3–12 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes, deciduous as a whole. Racemes 12–35, borne along a central axis, the lowest whorled, radiating, straight, unilateral, 10–25 cm long. Central inflorescence axis 6–18 cm long. Rhachis wingless, angular. Spikelet packing distant. Raceme-bases filiform, 50–150 mm long, glabrous. Spikelets appressed, 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 oblong, dorsally compressed, 1.1–1.3 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong or ovate, 0.2–1 length of spikelet, membranous, 5 -veined, ribbed, with unevenly spaced veins, glabrous, acute. Fertile lemma elliptic, 1.1–1.3 mm long, cartilaginous, much thinner on margins, light brown or dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Kenya.

Digitaria aristulata (Steud.) Stapf. *Fl. Trop. Afr.* 9:471 (1919).

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

TYPE from Senegal. **Basionym or Replaced Name:** *Panicum aristulatum* Steud., *Syn. Pl. Glumac.* 1: 42 (1855)[1853].

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.R. Leprieur G*, no date, Senegal (P; IT: US-80470 (fragm.)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (51).

Derivation (Clifford & Bostock 2007): *L. arista*, bristle; *-ula*, diminutive; *-ata*, possessing. Lemma awned.

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

Habit, Vegetative Morphology. Annual. Culms prostrate, 5–15 cm long, rooting from lower nodes. Culm-nodes pubescent or bearded. Ligule a ciliate membrane. Leaf-blades 1–3 cm long, 2–3 mm wide. Leaf-blade surface pilose. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, erect, unilateral, 2–4 cm long. Rhachis broadly winged, with rounded midrib, 0.8 mm wide. Spikelets appressed, in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster. Pedicels present, unequal, 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 oblong, dorsally compressed, acuminate, 1.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 0.33 length of spikelet, hyaline, without keels, 3 -veined. Upper glume surface puberulous, with verruculose hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.8 length of spikelet, membranous, 7 -veined, puberulous, with verruculose hairs, acute. Fertile lemma ovate, 1.7 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1.3–1.5 mm long overall. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.4 mm long.

Distribution (TDWG). Continent. Africa.

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

Digitaria arushae Clayton. *Kew Bull.*, 29(3): 518 (1974).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tanzania: Arusha Dist.: Ngurdoto Natl. Park, Kinandia Swamp, open parts of Lippia-Lantana-Aspilia thicket on stony ridge, 5 Nov 1965, *Greenway & Kanuri 12283* (HT: K).

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

Derivation (Clifford & Bostock 2007): From the Arusha District of Tanzania.

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

Habit, Vegetative Morphology. Perennial. Rootstock evident. Cataphylls evident. Butt sheaths pubescent. Culms geniculately ascending, 50–100 cm long, woody. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 3–15 cm long, 3–9 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, in several whorls, spreading, unilateral, 2–6 cm long. Central inflorescence axis 8–20 cm long. Rhachis wingless, angular, with scattered hairs. 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, dorsally compressed, 1.8–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.75–0.8 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, 7 -veined, pubescent, acute. Fertile lemma elliptic, 1.8–2.2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Kenya, Tanzania.

Digitaria asthenes Clayton. *Kew Bull.*, 29(3): 518 (1974).

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

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tanzania: Tunduru Dist.: Namakambili Rock, 60 mi [97 km] from Masai, in sandy grit at base of rock, 20 Mar 1963, *Richards 17989* (K).

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

Derivation (Clifford & Bostock 2007): Gk. asthenes, of low specific gravity; -ike, belonging to. Growing on very high mountains.

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

Habit, Vegetative Morphology. Annual. Culms rambling, weak, 30–40 cm long. Ligule an eciliate membrane. Leaf-blades 2–6 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 2–5 cm long. Rhachis wingless, angular. 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 lanceolate, dorsally compressed, 1.8–2.2 mm long, falling entire.

Glumes. Glumes two, 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 obtuse. Upper glume lanceolate, 0.5–0.66 length of spikelet, membranous, without keels, 3 -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, 5(–7) -veined, with unevenly spaced veins (laterals contiguous), setose, hairy on veins, bearing white hairs or dark brown hairs, bearing hairs 0.5–1 mm long, acute. Fertile lemma elliptic, 1.8–2.2 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria atra Lucas. *Journ. Wash. Acad. Sci.* 2: 159 (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: *Mller s.n.*, Venezuela: Mirida: Tabay (VEN-222492; IT: MO (fragm.)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950).

Illustrations (Journals): *Amer. J. Bot.* (88: 1672, Fig.2 (2001)).

Derivation (Clifford & Bostock 2007): L. dark. The anthoecium is dark-brown.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 30–38 cm long, 2–3 -noded. Culm-internodes distally pubescent or pilose. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1–1.5 mm long, obtuse. Leaf-blades flexuous, 6–25 cm long, 2–3 mm wide. Leaf-blade surface hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 6–7 cm long. Rhachis angular, 0.5 mm wide. Fertile spikelets pedicelled. Pedicels present, ciliate.

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

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, pallid, 3 -veined, pubescent, with capitate hairs, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, black, without keel. Lemma surface papillose, puberulous, hairy at base, hairy in lines (two), with capitate hairs. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

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

Digitaria atrofusca (Hack.) A. Camus. *Bull. Mus. Hist. Nat. Paris*, 30: 107 (1924).

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

TYPE from Madagascar. **Basionym or Replaced Name:** *Panicum atrofuscum* Hack., *J. Linn. Soc., Bot.* 29: 63 (1891)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.F. Scott Elliot 1909*, no date, Madagascar: Imerina, marshy ground, Lake Itasy (W-23163; IT: K, US-1126065 (fragm.)).

Recent Synonyms: *Digitaria seminuda* Stapf, *Prain, Fl. Trop. Afr.* 9: 446 (1919).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (36, Fig. 9 & 385, Fig. 145 as *D. aff. seminuda*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (53, 437 & 677 as *D. masambaensis. D. seminuda*).

Derivation (Clifford & Bostock 2007): L. ater, dark; fusca, brown. The fertile floret is dark-brown.

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

Habit, Vegetative Morphology. Perennial, short-lived. Culms decumbent or rambling, 80–150 cm long. Ligule an eciliate membrane. Leaf-blades 15–45 cm long, 2–11 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–11, digitate, unilateral, 8–22 cm long. Rhachis broadly winged, with rounded midrib. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.8–2.7 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.1–0.2 mm long, 0.05–0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.33–0.66 length of spikelet, membranous, 3 -veined. Upper glume surface glabrous or pubescent, with capitate hairs (minutely). Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, glabrous or pubescent, with capitate hairs (minutely), acute. Fertile lemma elliptic, 1.8–2.7 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis flattened.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. Ghana, Guinea, Nigeria, Sierra Leone. DRC. Tanzania. Zambia. Madagascar.

Digitaria badia (Scribn. & Merr.) Fernald. *Rhodora*, 22: 104 (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 Mexico. **Basionym or Replaced Name:** *Panicum badium* Scribn. & Merr., *Bull. Div. Agrostol., U.S.D.A.* 24: 12, f. 3 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C.L. Smith 915*, 6 Oct 1894, Mexico: Oaxaca: Sierra de San Felipe, alt. between 2300–2800 m (US-312466 (photo, L); IT: L (fragm. ex US), MO-1837588).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (57).

Derivation (Clifford & Bostock 2007): L. dull brown. Anthoecium dark-brown.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–70 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes glabrous. Lateral branches lacking. Ligule an eciliate membrane, 1–2.5 mm long. Leaf-blades 4–15 cm long, 2–6 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 6–10 cm long. Central inflorescence axis 2 cm long. Rhachis angular, 0.3–0.4 mm wide, 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, dorsally compressed, 2.3–3 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, 0–0.5 mm long, 0.1–0.25 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Upper glume elliptic, 1.6–2.5 mm long, 0.66–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins, with capitate hairs. Upper glume hairs dark brown. 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, pubescent, hairy between veins, with capitate hairs, bearing dark brown hairs, acute. Fertile lemma elliptic, 2.5–2.7 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1 mm long.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica.** Honduras, Panama.

TDWG4. Distrito Federal, Mexico State, Morelos. Guanajuato, Zacatecas. Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.

Digitaria baileyi (Benth.) D. K. Hughes. *Kew Bull.* 1923, 311 (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 baileyi* Benth.*Fl. Austral.*, 7: 471 (1878). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Bailey s.n.*, Australia: Queensland:

Brisbane River (K; IT: MEL). LT designated by Henrard, Monogr. Digitaria 58 (1950). ST: *McGillivray s.n.*, Australia: Queensland: Port Curtis.

Illustrations (Books): J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(2)), 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), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (59).

Derivation (Clifford & Bostock 2007): in honor of Frederick Manson Bailey (1827–1915) English-born Australian botanist.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Butt sheaths villous. Culms erect, 45–60 cm long. Culm-nodes bearded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blades 7–14 cm long, 3–5 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scabrous, rough on both sides, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 6–9, borne along a central axis, ascending or spreading, unilateral, 7–10 cm long. Central inflorescence axis 5–6 cm long. Rhachis angular. Spikelet packing distant. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 2 mm long, scabrous, 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 oblong, dorsally compressed, acute, 2.5 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.5 mm long, 0.05–0.2 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. 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 equidistant veins, pubescent, hairy between veins, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface rugulose. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central, South East.

Digitaria bakeri (Nash) Fernald. *Rhodora*, 22 :102 (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 USA. **Basionym or Replaced Name:** *Syntherisma bakeri* Nash, *Bull. Torrey Bot. Club* 25: 296 (1898)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *C.H. Baker* 47, no date, USA: Florida: Grasmere (NY-69764; IT: US-1761012).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (365), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (60).

Derivation (Clifford & Bostock 2007): in honor of Charles Henry Baker (1848-) United States botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–90 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 0.8–2.2 mm long. Leaf-blades 10–24 cm long, 2–4.5 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 5–10 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, scabrous on margins. Spikelets 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, dorsally compressed, 2.3–2.4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.4–1.5 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex truncate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, puberulous, acute. Fertile lemma elliptic, 2.3–2.4 mm long,

cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1–1.1 mm long.

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

Country /Province /State. Southeastern USA, Mexico. Florida. Gulf (Mexico), Southwest Mexico. Mesoamerica. Honduras, Panama. Veracruz. Jalisco, Oaxaca.

Digitaria balansae Henrard. *Meded. Herb. Leid. No.* 61, 2 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 91*, 2 Mar 1876, Paraguay: Cosme, dans les marais (L; IT: BAA, G).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (84, Fig. 21), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (61).

Illustrations (Journals): *Darwiniana* (19: 133, Fig. 19 (1974)).

Derivation (Clifford & Bostock 2007): in honor of Benjamin Balansa (1825–1892) French botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 80–200 cm long, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Lateral branches sparse or ample. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.2 mm long, brown, erose, truncate. Leaf-blades 10–20 cm long, 4–7 mm wide. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence composed of racemes, exserted or embraced at base by subtending leaf. Racemes 2–11, digitate, unilateral, 4–22 cm long. Central inflorescence axis 1–4 cm long. Rhachis angular, 0.4–0.5 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, 0.5–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets obovate, dorsally compressed, 1.8–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.5–1.6 mm long, 0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent, hairy between veins but central interspaces glabrous, with clavate hairs, acute. Palea of lower sterile floret 0.3–0.4 mm long, 0.15 length of lemma. Fertile lemma elliptic, 1.8–2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.6 mm long. Caryopsis with adherent pericarp, 1–1.1 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil South. Paraguay. TDWG4. Chaco, Corrientes, Misiones.

Digitaria basaltica B.K.Simon. *Austrobaileya* 8: 194 (2010).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Queensland: North Kennedy District: Great Basalt Wall, 5 April 1995, *R.J.Fensham 2183* (holo: BRI; iso: CANB, K).

Illustrations (Journals): *Austrobaileya* (8: 195, Fig.1 (2010)).

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect, 70–90 cm long, 3–51 -noded. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1.9–2.3 mm long. Leaf-blades 9–10 cm long, 3–5 mm wide. Leaf-blade surface scabrous, pubescent, densely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 14–17, borne along a central axis, unilateral, 17–37 cm long, bearing 24–36 fertile spikelets on each. Central inflorescence axis 10–14 cm long. Rhachis angular. Spikelet packing distant. Raceme-bases filiform. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. 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, dorsally compressed, 2.2–2.4 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.8–0.9 mm long, 0.33 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex acute. Upper glume elliptic, 2.1–2.3 mm long, 1 length of spikelet, membranous, without keels, 7 -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, 2.2–2.4 mm long, 1 length of spikelet, membranous, 7 -veined, puberulous, hairy between veins, acute. Fertile lemma elliptic, 1.9–2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous. Palea keels wingless.

Distribution (TDWG). Continent. Australasia.

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

Digitaria barbinodis Henrard. *Monogr. Gen. Digitaria*, 67 (1950).

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: HT: *A.J.B. Chevalier 43090*, 18 Jan 1932, Sudan (L; IT: P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (67).

Derivation (Clifford & Bostock 2007): L. barba, beard; nodus, knot. Nodes bearded.

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

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 30–50 cm long. Culm-nodes bearded. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 5–10 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, digitate, unilateral, 5–10 cm long. Rhachis wingless, angular. 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, dorsally compressed, 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, 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, 5 -veined, with equidistant veins, glabrous, acute. Fertile lemma elliptic, 2–2.2 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Mali, Nigeria.

Digitaria benthamiana Henrard. *Blumea*, 1: 99, in obs. (1934).

Regarded by K as a synonym (*D. papposa*).

Accepted by: 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: *Henne s.n.*, Australia: Sweers Island (W; IT: MEL).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (70).

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

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of George Bentham (1800–1884) English botanist.

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

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland.

Digitaria bicornis (Lam.) Roem. & Schult. *Syst. Veg.* 2: 470 (1817).

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 *D. bicornis*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from India. **Basionym or Replaced Name:** *Paspalum bicorne* Lam., *Tabl. Encycl.* 1: 176 (1791). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India:, *P. Sonnerat s.n.* (HT: P-LAM; IT: US-2854145n (fragm.))

TYPE COLLECTION: *F.W. Sieber 42*, Mauritius? (US-1064446).

Recent Synonyms: *Digitaria biformis* Willd., *Enum. Hort. Berol.* 92 (1809).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (389, Fig 147 as *D. biformis*), K.M.Matthew, Illustrations on the *Flora of Tamilnadu Carnatic* (1982) (Pls. 846 & 847), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pls. 746 & 747), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (53, Fig. 41), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(3)), 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) (381), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (182, Fig 59), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (87, Fig. 22), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 132, Fig. 9 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (66, 68, 76, 77, 500 & 613 as *D. barbata*, *D. barbata*, *D. biformis* x 2, *D. nuda* var. *senegalensis*, *D. queenslandica*).

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

Derivation (Clifford & Bostock 2007): spikelets paired and subfiliform.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–45 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2 mm long, truncate. Leaf-blades elliptic, 1–12 cm long, 2–8 mm wide. Leaf-blade surface scaberulous, rough on both sides, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins unthickened or cartilaginous, undulate, scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, straight, unilateral, 5–10 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster, heteromorphic (lower almost glabrous). 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 elliptic, dorsally compressed, acute, 3 mm long, falling entire.

Glumes. Glumes two. Lower glume ovate, 0.2–0.5 mm long, 0.1 length of spikelet. Lower glume apex obtuse. Upper glume lanceolate, 0.66 length of spikelet, membranous, 3 -veined. Upper glume surface glabrous. Upper glume margins ciliate or setose. 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 thickened veins, ribbed, pilose or setose (upper spikelet), hairy between veins but central interspaces glabrous, ciliate on margins, acute. Fertile lemma elliptic, 3 mm long, cartilaginous, much thinner on margins, light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–1 mm long. Caryopsis with adherent pericarp, ellipsoid, 2–2.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

$N = 27$ (1 ref TROPICOS), or 36 (1 ref TROPICOS). $2n = 72$ (1 ref TROPICOS).

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

Country /Province /State. **Northern Africa, West-central tropical Africa, Western Indian ocean.** Libya. Mauritius, Madagascar. **China, Eastern Asia.** China South Central, Hainan, China Southeast. Japan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuaia.** India, Sri Lanka. Cambodia, Myanmar, Thailand, Vietnam. Java, Lesser Sunda Is, Malaya, Philippines. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Australia.** Western Australia, Northern Territory, Queensland. **Southwestern Pacific.** Fiji (*). Caroline Is (*), Marianas (*), Wake Is (*). Hawaii (*). **Southwestern USA, South-central USA, Southeastern USA, Mexico.** California. Texas. Florida, Georgia, Louisiana, South Carolina, Virginia. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil North. Argentina Northwest, Paraguay.

TDWG4. Fujian. Yunnan. Manipur. Kerala. Uttah Pradesh, West Bengal. Himachal Pradesh. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East, Inland. Goias. Jujuy, Salta. Corrientes, Formosa. Distrito Federal, Mexico State, Morelos, Puebla. Chihuahua, Hidalgo, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Baja California, Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Digitaria bidactyla Van der Veken. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 413 (1975).

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, Luwingu: Astle 312 (SRGH holo, K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): Gk *bis*, twice; *dactylos*, finger. Inflorescence formed of two narrow branches.

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

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect, slender, 10–20 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 3–5 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 2–4 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.3–0.5 mm wide, scabrous on margins. Raceme-bases filiform. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 0.5–1 mm long, smooth, puberulous, hairy at tip, 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, gibbous, 2.3–2.5 mm long, with hairs extending 1 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, gibbous, 0.66 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 lanceolate, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma lanceolate, gibbous, 2–2.3 mm long, cartilaginous, much thinner on margins, yellow, keeled. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria blakei Henrard. *Monogr. Gen. Digitaria*, 78 (1950).

Regarded by K as a synonym (*D. orbata*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Australia, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Blake 8476*, 10 Apr 1935, Australia: Queensland: Burke: Poison Creek, 838 m (L).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (78).

Derivation (Clifford & Bostock 2007): in honor of Stanley Thatcher Blake (1911–1973), Queensland botanist.

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

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North.

Digitaria bonplandii Henrard. *Monogr. Gen. Digitaria*, 80 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 10862*, 7–11 Feb 1930, Brazil: Mato Grosso: 12 km W of Campo Grande, alt. 480–540 m, , culms few together, ascending, sandy clay campo (L-935.81–97; IT: L, MO-5191406, US-1501070).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (89, Fig. 23), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (81).

Derivation (Clifford & Bostock 2007): in honor of Aimi Jacques Alexandri Bonpland (1773–1858) French-born Brazilian botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 100–150 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, striately veined, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1–1.5 mm long, erose, truncate. Leaf-blades 20–30 cm long, 8–10 mm wide. Leaf-blade surface ribbed, glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes (1–)3–5, digitate, sinuous, unilateral, 10–24 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, 0.5–0.6 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, angular, unequal, scabrous, ciliate, hairy all along but hairs longer above, 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, dorsally compressed, 2.5 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 2.4 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent, hairy between veins, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 2.5 mm long, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, with capitate hairs, acute. Palea of lower sterile floret 0.9–1 mm long, pubescent. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.4–0.5 mm long. Anthers 3, 1–1.2 mm long, purple. Caryopsis with adherent pericarp, 2 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG), Continent. South America.

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

Digitaria bovonii Chiov. *Ann. Bot., Roma*, 13: 40 (1914).

Regarded by K as a synonym (*D. setifolia*).

TYPE from DRC. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Bovone* 70, 29 Nov 1910, Zaire: Katanga: Kayoyo (herb. Turin).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (87).

Derivation (Clifford & Bostock 2007): in honor of Ettore Bovone (1880–1922) Italian veterinarian and plant collector in Zaire.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 30–60 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths 12–15 cm long, pubescent. Ligule an eciliate membrane. Leaf-blades curved or flexuous, filiform, convolute, 10–15 cm long, 0.5–1.5 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence composed of racemes. Racemes 3–7, borne along a central axis, unilateral, 5–10 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled, 3 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, 2–2.5 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.1 mm long, 0.05 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.8–0.9 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent or pilose, hairy between veins, with simple hairs or capitate hairs (obscurely). Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins but central interspaces glabrous, with simple hairs or capitate hairs (obscurely), bearing hairs 0.5–0.6 mm long, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG), Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. DRC.

Digitaria brazzae (Franch.) Stapf. Pain, *Fl. Trop. Afr.* 9: 447 (1919).

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 brazzae* Franch., *Bull. Soc. Hist. Nat. Autun* 8: 354 (1895)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. Congo, dans les prairies a Brazzaville, *J. de Brazza & Thollon* 391 (HT: P).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (88 & 721 as *D. sulcigluma*).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): in honor of Jacques de Brazza (1859–87) Belgian botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with soft dead sheaths. Culms erect, 60–130 cm long. Ligule an eciliate membrane. Leaf-blades 8–30 cm long, 3–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–12, digitate, unilateral, 10–20 cm long. Rhachis narrowly winged, angular. Spikelets in threes. Fertile spikelets pedicelled, 3 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, 2–3 mm long, with hairs extending 1–2 mm beyond apex, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.2–0.4 mm long, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.5–0.75 length of spikelet, membranous, 3 -veined. 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, thinner along midline (on either side), 5–7 -veined, with 2 longitudinal grooves, with dorsal tufts of hair (at base), 2 hair tufts in all, ciliate on margins, bearing hairs 0.8–3 mm long, acute. Fertile lemma elliptic, gibbous, 2–3 mm long, cartilaginous, much thinner on margins, grey or light brown, keeled, keeled below. Lemma margins flat, covering most of palea. Lemma apex rostrate. Palea cartilaginous.

Flower and Fruit. Caryopsis dorsally compressed.

N = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Congo, DRC. Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Free State.

Digitaria breedlovei R.W. Pohl & G. Davidse. *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 Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Breedlove* 37709, 12 Sep 1974, Mexico (MO).

Illustrations (Journals): *Novon* (2: 107, Fig. 8 (1992)).

Derivation (Clifford & Bostock 2007): in honor of Dennis E. Breedlove (1939-) United States botanist.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms 25–50 cm long. Culm-internodes distally glabrous. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 0.7–1 mm long, truncate. Leaf-blades 4–10 cm long, 2–3 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, digitate, unilateral, 6–8 cm long. Rhachis angular, 0.2–0.3 mm wide, pilose on surface. Rhachis hairs 1–2 mm long. Spikelets appressed, in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 1.3–1.5 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 ovate, dorsally compressed, 1.3–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or both absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume when present ovate, 0–0.4 mm long, 0–0.25 length of spikelet, hyaline, without keels. 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, pubescent, acute. Fertile lemma elliptic, 1.3–1.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5 mm long.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southeast Mexico.

TDWG4. Chiapas.

Digitaria diminuta (as "breviglumis") (Domin) Henrard. *Monogr. Gen. Digitaria*, 92 (1950).

More checking of status required.

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, Queensland. **Basionym or Replaced Name:** *Panicum breviglume* Domin, *Biblioth. Bot.* 85: 298 (1915). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Domin II. 1910*, Australia: Queensland: Dividing Range west of Pentland (K).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler,, *Grasses of New South Wales*, 4th edn (2008) (214), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(4)(12) as *D. diminuta*), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (187 & as *D. diminuta*).

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

Derivation (Clifford & Bostock 2007): *L. brevis*, short; *gluma*, husk. One or both glumes short with respect to the length of the spikelet.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths glabrous or sparsely hairy. Culms erect, 20–70 cm long, 1–1.5 mm diam., 2–3 -noded. Culm-nodes glabrous. Leaf-sheaths keeled, striately veined, pilose. Ligule an eciliate membrane, 2–4 mm long, erose, truncate or obtuse. Leaf-blades 3–15 cm long, 1–3 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scabrous, glabrous or pilose. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–10, borne along a central axis, flexuous, unilateral, 2–10 cm long. Central inflorescence axis 1–8 cm long. Rhachis angular. Spikelet packing lax, irregular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 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 oblong or ovate, dorsally compressed, 1.25–1.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, 0.15–0.2 length of spikelet, membranous. Lower glume apex obtuse. Upper glume elliptic, 0.25–0.33 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins obscure. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9–1 length of spikelet, membranous, 3–7 -veined, glabrous, obtuse. Fertile lemma elliptic or ovate, 1.25–1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute or apiculate. Palea cartilaginous.

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

Region. Northern Europe (*).

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

TDWG4. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Digitaria brownii (Roem. & Schult.) D. K. Hughes. *Kew Bull.* 1923, 313 (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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum villosum* R. Br. *Prodr.* 192 (1810), non Lam. (1791). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Australia: Coll?.

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (439, Fig 369), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (607, Fig 123), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (214), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(5)), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (235, Fig. 37), D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia. CD-Rom Version 1.0.* (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (98).

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

Derivation (Clifford & Bostock 2007): in honor of Robert Brown, (1773–1858), Scots-born English botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Culms erect or geniculately ascending, 30–100 cm long. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades 6–12 cm long, 3–5 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous or pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–7, digitate, unilateral, 5–18 cm long. Central inflorescence axis 1–3(–6) cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 3–5 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 or ovate, dorsally compressed, acute, 3–3.5 mm long, with hairs extending 2–3 mm beyond apex, falling entire.

Glumes. Glumes two, reaching apex of florets. Lower glume ovate, 0.75 mm long, 0.25–0.33 length of spikelet, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, 3 -veined. Upper glume surface villous. Upper glume hairs 3–3.5 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, villous, hairy between veins but central interspaces glabrous, bearing hairs 3–3.5 mm long, acute. Fertile lemma elliptic, 2.75 mm long, cartilaginous, much thinner on margins, pallid, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.75 mm long. Caryopsis with adherent pericarp.

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

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, A.C.T., Victoria. New Caledonia.

TDWG4. Tamilnadu. 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.

Digitaria brunoana F.M. Raimondo. *Giorn. Bot. Ital.*, 122: 252 (1988).

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>: *vide* TROPICOS and Kew Synonymy Database: Somalia, Gesira: Raimondo (FT holo, PAL, K).

Illustrations (Books): T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (241, Fig 140).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Francisco Bruno (1897–1986) Italian botanist.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms prostrate, 5–10 cm long. Culm-nodes brown. Lateral branches ample. Leaf-sheaths 0.4–3 cm long, mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 3–6 mm long, erose. Leaf-blades lanceolate, 0.5–3 cm long, 2–4 mm wide. Leaf-blade surface hirsute. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–4), paired or digitate, unilateral, 0.6–2.7 cm long. Rhachis broadly winged, with rounded midrib, scabrous on margins. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1 in the cluster or 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, 1–1.2 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 pubescent, with simple hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with simple hairs, acute. Fertile lemma elliptic, 1–1.2 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers purple. Caryopsis with adherent pericarp, ellipsoid, 0.8–1 mm long.

Distribution (TDWG). Continent. Africa.

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

Digitaria calcarata Clayton. *Kew Bull.*, 29(3): 524 (1974).

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, Kasama: Robinson 4411 (K holotype).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): *L. calcar*, spur; *-ata*, denoting possession. Base of upper glume formed into a spur.

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

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect, slender, 10–25 cm long. Culm-nodes brown, pubescent. Leaf-sheaths scaberulous. Ligule a ciliolate membrane, 1–2 mm long, erose. Leaf-blades 4–8 cm long, 2–4 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–6 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.6–0.75 mm wide, pubescent on margins. Raceme-bases filiform. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–3 mm long, scabrous, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate (rhomboidal), dorsally compressed, 2.5–2.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, spurred, 0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume hairs white or dark brown. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5(–7) -veined, pilose, bearing white hairs or dark brown hairs, acute. Fertile lemma lanceolate, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria caledonica Henrard. *Blumea*, 1: 100 (1934).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from New Caledonia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *B. Balansa* 1730, 1868, Nova Caledonia: Noumia (L).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950).

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

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 20–40 cm long, 5-noded, with 0.5 of their length below uppermost node. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long, obtuse. Leaf-blades 10–12 cm long, 3–5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–8, digitate, unilateral, 6–11 cm long. Central inflorescence axis 1.5–2.5 cm long. Rhachis broadly winged, with rounded midrib, scaberulous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 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 elliptic, dorsally compressed, acute, 1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 1 mm long, 0.66 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 elliptic, 0.9 length of spikelet, membranous, 3–5-veined, glabrous, obtuse. Fertile lemma elliptic, 1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Southwestern Pacific. Fiji (*), New Caledonia.

Digitaria californica (Benth.) Henrard. *Blumea*, 1: 99 (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. **Basionym or Replaced Name:** *Panicum californicum* Benth., *Bot. Voy. Sulphur* 55–56 (1844)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Hinds s.n.*, 1841, Mexico: Baja California Sur: Bay of Madalena (K; IT: US-80544 (fragm.)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (369), F.W.Gould, *The Grasses of Texas* (1975) (413, Fig. 221), S.A.Rennoize, *Gramineas de Bolivia* (1998) (533, Fig. 121), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (357, Fig. 149), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (476, Fig. 123), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (517, Fig. 346), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (92, Fig. 24 as var. *villosissima*), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (308, Fig. 130), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (107).

Illustrations (Journals): *Darwiniana* (19: 94, Fig.6 and Fig.7, as var. *villosissima* (1974)).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms erect, 50–100 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades 2–12 cm long, 2–5 mm wide. Leaf-blade surface glabrous or puberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–8, borne along a central axis, appressed, unilateral, 3–5 cm long. Central inflorescence axis 5–7 cm long. Rhachis angular. 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 lanceolate, dorsally compressed, 3–4 mm long, with hairs extending 2–4 mm beyond apex, falling entire. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.5–0.6 mm long, 0.15 length of spikelet, hyaline, 0-veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3–5-veined. Upper glume surface villous. Upper glume hairs white, 2–4 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, 3–5-veined, glabrous, ciliate on margins, bearing white hairs, bearing hairs 2–4 mm long, acute. Fertile lemma lanceolate or ovate, 3 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute, awned. Palea cartilaginous.

Flower and Fruit. $2n = 72$ (1 ref TROPICOS).

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

Country /Province /State. Northwest USA, North-central USA, Southwestern USA, South-central USA, Mexico. Colorado. Oklahoma. Arizona. New Mexico, Texas. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico. Northern South America, Western South America, Southern South

America. Bolivia, Colombia, Peru. Argentina Northeast, Argentina South, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, La Pampa, Santa Fe. Río Negro. Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Baja California, Baja California Sur, Sinaloa, Sonora. Jalisco.

Digitaria cardenasiana Gir.-Cagas. *Caldasia* 24(2):369 (2002).

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

TYPE from Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Colombia, Meta, mpio. Puerto Lopez, finca Los Laureles, *O. Rangel & J. Espina 1418* (ht=COL).

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

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 30–60 cm long, 3–6 -noded. Culm-internodes terete, striate, smooth. Culm-nodes constricted, glabrous. Leaf-sheaths 6–12 cm long, woolly, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5 mm long, erose. Leaf-blades 10–20 cm long, 3–6 mm wide. Leaf-blade surface woolly. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 5–10 cm long. Central inflorescence axis 0.5–4 cm long, glabrous or pubescent. Rhachis angular, 0.5 mm wide, scaberulous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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 elliptic, dorsally compressed, 1.8–2.4 mm long, with hairs extending 1 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.6–2.2 mm long, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1.8–2.2 mm long, 1 length of spikelet, membranous, (5–)7 -veined, prominently veined, pubescent, hairy between veins, with capitate hairs. Palea of lower sterile floret hyaline, 0.3 mm long. Fertile lemma elliptic, 1.6–2.2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Lodicules 2, 0.35 mm long, truncate.

Distribution (TDWG). Continent. South America.

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

Digitaria catamarcensis Z.E. Rugolo de Agrasar. *Hickenia*, 1(5): 22 (1976).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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. Parodi 14356*, 12 Feb 1941, Argentina: Prov. Catamarca: dep. Capayan, Miraflores (SI; IT: BAA, LP).

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

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

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Butt sheaths pubescent. Culms 68–100 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2.5 mm long, erose, obtuse. Leaf-blades 7–23 cm long, 3–6 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 7–9, borne along a central axis, unilateral, 5 cm long. Central inflorescence axis 20–27 cm long. Rhachis angular, 0.5 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 1–6.5 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, dorsally compressed, 6.3–6.6 mm long, with hairs extending 3 mm beyond apex, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6–0.7 mm long, 0.1 length of spikelet, hyaline. Lower glume apex obtuse. Upper glume elliptic, 5.5–5.7 mm long, 0.9

length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume hairs dark brown. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pilose, hairy between veins but central interspaces glabrous, bearing dark brown hairs, acuminate, awned. Awn of lower sterile floret 3 mm long. Palea of lower sterile floret 0.4 mm long. Fertile lemma elliptic, 5–5.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Lodicules 2, 0.4–0.5 mm long. Anthers 3, 1.4 mm long. Caryopsis with adherent pericarp, 2.3–2.6 mm long. Embryo 0.5 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia.

TDWG4. Catamarca.

Digitaria cayoensis Swallen. *Journ. Wash. Acad. Sc.* 28: 8 (1938).

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

TYPE from British Honduras. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C.L. Lundell 6670*, Jul-Aug 1936, Belize: Cayo: Mountain Pine Ridge, in soil pockets in granite in stream-bed, San Agustin (US-1647578 (photo, L)); IT: F, K, L (fragm. ex US), NY-99679, TEX).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (117).

Illustrations (Journals): *Darwiniana* (45: 98, Fig.1 (2007)).

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

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 40–80 cm long, without nodal roots or rooting from lower nodes. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths longer than adjacent culm internode, without keel, hirsute. Ligule an eciliate membrane. Leaf-blades 8–16 cm long, 3–5 mm wide. Leaf-blade surface scabrous, pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–7, digitate or borne along a central axis, unilateral, 8–12 cm long. Central inflorescence axis 2–8 cm long. Rhachis angular, 0.3 mm wide, scabrous on margins. Raceme-bases brief, pilose. Spikelets in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 1–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.5–1.6 mm long, with hairs extending 0.2 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 1.3 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 1.4–1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

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

Country /Province /State. Mexico. Southwest Mexico, Southeast Mexico. **Mesoamerica.** Belize, Guatemala, Honduras, Panama.

Oaxaca. Chiapas, Yucatan.

Digitaria chacoensis (L. Parodi) Henrard. *Monogr. Gen. Digitaria*, 560 (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 Argentina. **Basionym or Replaced Name:** *Digitaria phaeothrix* var. *chacoensis* Parodi, *Physis* 9:19 (1928). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *S. Venturi (herb. L. R. Parodi 1575)*, no date, Argentina: Chaco: Embarcacion, bsrdes arenosos del Rmo Parana (BAA; ILT: L (fragm.), US-1163253). LT designated by Henrard, *Monogr. Digitaria*: 562 (1950).

ST: *L. R. Parodi* 8250, Jan 1928, Argentina: Chaco, Dpto. Resistencia, Resistencia, & orillas del Rmo San Fernando (BAA).

Illustrations (Journals): *Darwiniana* (19: 120, Fig. 13 (1974)).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths sparsely hairy. Culms robust, 50–70 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, truncate. Leaf-blades filiform, convolute, 1–2 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 3, digitate, unilateral, 10–15 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, angular, unequal, 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 lanceolate, dorsally compressed, 4.2–4.5 mm long, 0.6 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 2.5–2.7 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, puberulous, pubescent on margins, acute. Palea of lower sterile floret 0.7 mm long. Fertile lemma elliptic, 4.2–4.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.3–0.4 mm long. Anthers 3, 1.75 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

TDWG4. Chaco.

Digitaria chaseae Henrard. *Monogr. Gen. Digitaria*, 118 (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 Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Chase* 11050, 26 Feb 1930, Brazil: Mato Grosso: Aquidauana, alt. 180 m, leaning, brushy sandy slope.

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (118).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 70–130 cm long. Culm-internodes distally glabrous. Culm-nodes constricted, pubescent. Lateral branches lacking or sparse. Leaf-sheaths striately veined, pilose, with tubercle-based hairs, outer margin hairy. Ligule a ciliolate membrane. Leaf-blades 5–20 cm long, 2–5 mm wide. Leaf-blade surface scaberulous, rough on both sides, pilose, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle 25–50 cm long, pubescent above. Racemes 1, single, unilateral, 17 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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 or ovate, dorsally compressed, 2.5 mm long, 1.25 mm wide, falling entire.

Glumes. Glumes two, 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 obtuse. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 6–7 -veined. Upper glume surface pubescent, hairy between veins, with capitate hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent, hairy between veins but central interspaces glabrous, with capitate hairs. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. South America.
Country /Province /State. Brazil. Brazil West Central.

Digitaria ciliaris Vanderyst, non(Retz.)Koel.(1802). *Bull. Agric. Congo Belge*, 16: 659 (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), 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) (as *D. adscendens*), 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) (as *D. chinensis*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from China. **Basionym or Replaced Name:** *Panicum ciliare* Retz., *Observ. Bot.* 4: 16 (1786). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Guangdong: Guangzhou, Wennerberg s.n. (LT: LD).

Recent Synonyms: *Digitaria chinensis* Hornem., *Hort. Hafr. Suppl.* 8 (1819). *Digitaria adscendens* (H. B. & K.) Henrard, *Blumea* 1 92 (1934).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, T. 41), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (379, Fig. 142 as *D. adscendens*), L.Boulos, *Flora of Egypt* 4 (2005) (309, Pl. 91), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (337, Fig. 130 & 338, Fig. 131 as *D. chinensis* & *D. adscendens*), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (500 & 522 as *D. sericea*), C-C Hsu, *Taiwan Grasses* (1975) (& as *D. sericea*), K.M.Matthew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pl. 748 & Pl. 749), H.J.Noltie, *The Grasses of Bhutan* (2000) (729, Fig. 44), H.B.Gilliland, *Grasses of Malaya* (1971) (197, Fig. 40), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (53, Fig. 42), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (440, Fig 370), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (215), J.C.Tothill.& J.B.Hacker. *The grasses of southern Queensland* (1983) (192 & 194(6)), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (235, Fig. 37), 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) (383 as var. *ciliaris*), S.A.Rennoize, *The Grasses of Bahia*, 1984 (252, Fig. 94), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (129, Fig. 36), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (306, Fig. 129 as *D.adscendens*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (11, 91, 124, 126, 430, 432, 553 & 730 as var. *rhachiseta*, *D. abortiva*, *D. brevifolia*, *D. chinensis*, *D. chrysoblephara*, *D. fimbriata*, *D. marginata*, *D. marginata* var. *nubica*, *D. pes-avis*, *D. tarapacana*), W.Burger, *Flora Costaricensis* 15, *Gramineae: Fieldiana Botany New Series* 4 (1980) (182, Fig. 59), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (as *D. adscendens*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 132, Fig. 9 & 135, Fig. 10(2006) as var. *ciliaris* & var. *rhachiseta*), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (178 Fig. 29), S-L Chen et al, *Flora of China*, Illustrations, *Poaceae* (2007) (Fig. 758 as *Digitaria ciliaris* var. *chrysoblephara* & *Digitaria ciliaris* var. *ciliaris*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:42(1980)).

Illustrations (Journals): *Ruizia* (13:399 Fig 53a-c (1993)).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, L.Boulos, *Flora of Egypt* 4 (2005);, H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);.

Derivation (Clifford & Bostock 2007): L. cilium, eyelid; -are, pertaining to. Glumes or lemmas ciliate on nerves or margins.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–100 cm long. Ligule an eciliate membrane. Leaf-blades 3–25 cm long, 3–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–12, digitate, unilateral, 6–22 cm long. Central inflorescence axis 0–5 cm long. Rhachis narrowly winged, angular, glabrous on surface or with scattered hairs, scabrous on margins. Spikelet packing contiguous, 0.3 their length apart. Spikelets appressed, in pairs. Fertile spikelets pedicelled, 2 in the cluster, all alike or heteromorphic (as to indumentum). 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–)2.5–3.3(–3.7) mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.4 mm long, 0.1 length of spikelet. Upper glume lanceolate, (0.5–)0.6–0.75 length of spikelet, membranous, 3 - veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins or with unevenly spaced veins, puberulous or pubescent or setose or villous, hairy between veins, eciliate on margins or ciliate on margins, acute. Fertile lemma elliptic, 2–3.7 mm long, cartilaginous, much thinner on margins, grey or dark brown, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea, ciliate. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

N = 27 (1 ref TROPICOS), or 36 (3 refs TROPICOS).

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

Region. Northern Europe (*), Southeastern Europe.

Country /Province /State. : Great Britain (*). : Italy. **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. Canary Is, Cape Verde, Madeira. Burkina, Guinea-Bissau, Guinea, Liberia, Mali, Mauritania, Nigeria, Senegal, Sierre Leone, Niger. DRC. Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Mozambique, Zimbabwe. Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Northern Cape, Eastern Cape. Ascension, St Helena. Mauritius, Madagascar, Seychelles. Russian far east, **Caucasus, Western Asia, Arabian Peninsula, China, Eastern Asia.** Primorye. Gulf States, Kuwait, Oman. China South Central, Hainan, Inner Mongolia, Manchuria, China North-Central, China Southeast, Tibet, Xinjiang. Japan, Kazan-retto, Nansei-Shoto, Ogosawara-shoto, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Assam, Bangladesh, Eastern Himalaya, India, Pakistan, Sri Lanka, West Himalaya. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Malaya, Singapore. **Australia, New Zealand.** Western Australia (*), Northern Territory (*), 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, Northwestern Pacific, North-central Pacific.** Fiji (*), Nauru (*), Niue (*), New Caledonia (*), Phoenix Archipelago (*), Samoa (*), Tonga (*), Tuvalu (*), Vanuatu (*), Wallis-Futuna Is (*). Cook Is (*), Easter Is (*), Marquesas (*), Society Is (*), Tuamotu Is (*), Tubuai Is (*). Caroline Is (*), Marcus Is (*), Marianas (*), Marshall Is (*), Wake Is (*). Hawaii (*). **North-central USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Kansas, Missouri, Nebraska. California. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands (as *D. adscendens*), Puerto Rico, Turks-Caicos Is, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northwest, Chile North, Paraguay, Uruguay.

TDWG4. Gansu, Hebei, Shaanxi, Shandong, Shanxi. Anhui, Fujian, Guangdong, Guangxi, Henan, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. Darjeeling, Bhutan. Kimberley, Ereman, South-West. Darwin & Gulf, Victoria R & Barkly Tableland, Central Australia. Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes. Catamarca, Jujuy (*), Mendoza, Salta, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, La Pampa, Misiones, Santa Fe. Tarapaca. Distrito Federal, Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, Tamaulipas, Zacatecas. Veracruz. Baja California, Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Digitaria clavitricha R.W. Pohl. *Novon*, 2(2): 108 (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>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 8149 [= *Amer. Gr. Nat. Herb. 1564*], 16 Sep 1911, Panama: Panama: Chorrera, prairie, especially on dry or gravelly places (MO-1617247; IT: K, P, SI, US-927696).

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

Derivation (Clifford & Bostock 2007): L. clava, club; Gk thrix, hair. Indumentum of minute balloon-shaped hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–90 cm long. Culm-internodes distally glabrous. Culm-nodes bearded. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 6–24 cm long, 2–3 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 2–4 cm long. Rhachis angular, glabrous on surface. Spikelets appressed, in threes. 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 elliptic, dorsally compressed, 1.8–1.9 mm long, 0.9–1.1 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.05–0.15 mm long, 0.03–0.06 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Upper glume ovate, 1.5–1.7 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, pubescent, with clavate hairs, acute. Fertile lemma elliptic, 1.8–1.9 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.9 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Panama.

Digitaria coenicola (Muell.) D. K. Hughes. *Kew Bull.* 1923, 313 (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 coenicola* F. Muell., *Trans. & Proc. Roy. Soc. Victoria* 1: 45 (1855). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Mueller s.n.*, Australia: South Australia: Cudnaka (MEL; IT: K).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (441, Fig 371), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (607, Fig 123), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (215), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(7)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (135).

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

Derivation (Clifford & Bostock 2007): *L. caenum*, mud; -cola, dweller. Growing in places subject to inundation.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths pubescent or villous. Culms erect or geniculately ascending, 15–60 cm long. Culm-internodes distally pubescent. Culm-nodes pubescent. Lateral branches ample. Leaf-sheaths pubescent or woolly. Ligule an eciliate membrane, obtuse. Leaf-blades 5–15 cm long, 3–6 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins entire or undulate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, the lowest whorled, spreading, straight, unilateral, 10–25 cm long. Central inflorescence axis 10–20 cm long. Rhachis angular, 0.25 mm wide, scabrous on margins. Spikelet packing distant. Raceme-bases filiform, 50–100 mm long, pilose, hairy at base. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.5–2 mm long or 4–15 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 linear or lanceolate, dorsally compressed, 4.5–5 mm long, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.15–0.33 length of spikelet, membranous, 3 -veined. Lower glume apex obtuse or acute. Upper glume elliptic, 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 elliptic, 1 length of spikelet, membranous, 5–7 -veined, pubescent, acute. Fertile lemma elliptic, 4 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, A.C.T., Victoria.

TDWG4. Central Australia. NW & Lake Eyre, Southern. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Digitaria cognata (Schult.) Pilger. *Engl. & Prantl, Nat. Pflanzenfam. Aufl. 2*, 14 e. 50 (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 USA. **Basionym or Replaced Name:** *Panicum divergens* Muhl. ex Elliott, *Sketch Bot. S. Carolina* 1(2): 130 (1816); *Panicum cognatum* Schult., *Mant. 2*: 235 (1824). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Elliott s.n.*, USA: South Carolina: Beaufort Co.: about Beaufort (CHARL; IT: US-80644 (fragm.)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (363 & 587), F.W.Gould, *The Grasses of Texas* (1975) (419, Fig. 224 as *Leptoloma cognatum* var. *cognatum*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (137).

Illustrations (Journals): *Systematic Botany* (19: 621, Fig.2 (1994)).

Derivation (Clifford & Bostock 2007): L. related. Similar to another species.

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

Habit, Vegetative Morphology. Perennial. Rootstock evident. Rhizomes absent or elongated. Butt sheaths pubescent. Culms 30–80 cm long. Ligule an eciliate membrane. Leaf-blades 3–10 cm long, 1–5 mm wide.

Inflorescence. Inflorescence a panicle, terminal and axillary, deciduous as a whole. Panicle open, ovate, effuse, 8–20 cm long. Primary panicle branches spreading. Panicle branches capillary, straight. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, 4–70 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, 2.5–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 1 length of spikelet, membranous, 3–5 -veined. Upper glume surface glabrous to 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, 5–7 -veined, glabrous to villous, acute. Fertile lemma elliptic, 2.5–4 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. $2n = 72$ (1 ref TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Eastern Canada, North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico.** Ontario. Illinois, Iowa, Kansas, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Maine, New Hampshire, New Jersey. Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Northeast Mexico, Gulf (Mexico), Northwest Mexico.

Coahuila, Chihuahua, Guanajuato, Neuvo Leon, Zacatecas. Veracruz. Sonora.

Digitaria comifera Pilger. *Notizbl. Bot. Gart. Berlin*, 15: 708 (1942).

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

TYPE from Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H.J. Schlieben 6151*, 20 Mar 1935, Africa: Tanganjika Terr.: Lindi-Bez. (LE, MO, US-2207601). Herb. Missouri Botanical Garden.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (414 as *D. lunularis*).

Derivation (Clifford & Bostock 2007): L. coma, hair of the head; fero, bear. Hairs of the lower lemma longer towards the apex.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms 30–80 cm long. Ligule an eciliate membrane. Leaf-blades 4–10 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, digitate, unilateral, 3–15 cm long. Rhachis broadly winged, with sharp-edged midrib. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 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, dorsally compressed, 2.2–2.7 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2 mm long, 0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex emarginate or truncate. Upper glume elliptic, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, thinner along midline (flanking midvein), 7 -veined, with thickened veins, with unevenly spaced veins (laterals contiguous or accrescent), smooth or tuberculate, rough on veins, glabrous (except for a few hairs at tip) or setose or villous, hairy on veins, with clavate hairs (at tip), acute. Fertile lemma ovate, 2.2–2.7 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis dorsally compressed.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Burundi, DRC. Tanzania, Uganda. Angola, Mozambique, Zambia, Zimbabwe. Namibia.

Digitaria compacta (Roth. ex R. & S.) Veldkemp. *Blumea*, 21(1): 71 (1973).

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 *Paspalum*).

Basionym or Replaced Name: *Paspalum compactum* Roth, *Syst. Veg.* 2: 316 (1817)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Heyne s.n.*, (B(Herb. Roth); IT: BM, K, L).

Illustrations (Books): K.M.Mathew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (Pl. 811 as *Paspalum compactum*), H.J.Noltie, *The Grasses of Bhutan* (2000) (729, Fig. 44), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (151, 152 & 246 as *D. corymbosa*, *D. corymbosa* var. *marathensis*, *D. fascicularis*).

Derivation (Clifford & Bostock 2007): inflorescence a contracted panicle.

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

Habit, Vegetative Morphology. Annual. Butt sheaths pilose. Culms robust, 80–90 cm long, 3–5 mm diam., 8–12 -noded, without nodal roots or rooting from lower nodes. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 5 mm long, truncate. Leaf-blades 15–30 cm long, 5–10 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface hirsute, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–20, digitate, unilateral, 5–10 cm long. Central inflorescence axis 1–4 cm long. Rhachis narrowly winged, with sharp-edged midrib, 1–2 mm wide, scabrous on margins. Spikelets in threes. Fertile spikelets sessile and pedicelled, 3 in the cluster. Pedicels present, cuneate, 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 or ovate, dorsally compressed, 2 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet. Upper glume ovate, 0.25–0.5 mm long, 0.15–0.25 length of spikelet, membranous, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic to ovate, 0.9 length of spikelet, membranous, 5 -veined, with equidistant veins, with veins meeting and uniting at apex, glabrous, acute. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Caryopsis with adherent pericarp.

N = 36 (1 ref TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, Eastern Himalaya, India. Myanmar. Darjeeling, Bhutan.

Digitaria complanata Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 411 (1975).

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, Malole: Robinson 4332 (M holo, K, SRGH).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): pedicles flattened.

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

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect, 10–20 cm long. Culm-nodes pallid, glabrous. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 2–5 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 2–4 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.6–0.8 mm wide, scabrous on margins, glabrous on margins. Raceme-bases filiform. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–1.5 mm long, ciliate, hairy above, 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 or oblong, dorsally compressed, gibbous, 1.9–2.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, gibbous, 0.5–0.66 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 oblong, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma oblong, gibbous, 1.5–1.8 mm long, cartilaginous, much thinner on margins, yellow, keeled. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria compressa Stapf. Prain, *Fl. Top. Afr.* 9: 443 (1919).

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

TYPE from Zimbabwe. **Basionym or Replaced Name:** *Digitaria homblei* Robyns, *Mem. Inst. Roy. Col. Belge*, 4to, *Sect. Sc. Nat. Med.*, 1.Fasc. 1: 27 (1931). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Mundy 2170*, Zimbabwe: Insiza (K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (249, Fig 100), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (114, 328 & 366 as *D. capitipila*, *D. homblei*, *D. katangenensis*).

Derivation (Clifford & Bostock 2007): L. *comprimo*, squeeze together. Culms flattened.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 50–120 cm long. Ligule an eciliate membrane. Leaf-blades 15–30 cm long, 2–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 6–15, borne along a central axis, unilateral, 5–15 cm long. Central inflorescence axis 2–8 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled, 3 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, 2.3–2.8 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.1 mm long, 0.05 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.33–0.8 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent or pilose, with simple hairs or capitate hairs (obscurely). Upper glume apex acute or obtuse (rarely).

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.75–0.9 length of spikelet, membranous, 7 -veined, pubescent or pilose, hairy between veins, with simple hairs or capitate hairs (obscurely), acute. Fertile lemma elliptic, 2.3–2.8 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Nigeria. DRC. Ethiopia (inc. Eritrea). Tanzania. Malawi, Mozambique, Zambia, Zimbabwe.

Digitaria connivens (Trin.) Henrard. *Meded. Herb. Leid.* No. 61, 6 (1930).

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 connivens* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 3,1(2–3): 206 (1834)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Martius s.n.*, Apr 1832, Brazil: Rio de Janeiro (LE-TRIN-0650.02; IT: P, US-80575, W).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (883, Fig. 180), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (147).

Derivation (Clifford & Bostock 2007): *L. conniveo*, let pass unnoticed. Overlooked by previous workers.

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

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms prostrate, 10–30 cm long (100–200cm long), rooting from lower nodes. Leaf-sheaths longer than adjacent culm internode. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 2.5–5.5 cm long, 2–5 mm wide. Leaf-blade margins cartilaginous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, erect, unilateral, 3–8 cm long. Rhachis wingless, angular, scaberulous on margins. 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 lanceolate or elliptic, dorsally compressed, 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, 7 -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, 9–11 -veined, glabrous, acute. Fertile lemma elliptic, 4 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

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

TDWG4. Sao Paulo Parana, Catarina, Rio Grande do Sul.

Digitaria corynotricha (Hack.) Henrard. *Meded. Herb. Leid.* No. 61, 2 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 corynotrichum* Hack., *Oesterr. Bot. Z.* 51: 335 (Sep 1901)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A.F.M. Glaziou 20124*, no date, Brazil: Minas Gerais (W; IT: B, BAA-1797 (fragm. ex B), K, US-80521 (fragm.)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (252, Fig. 94), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (154).

Derivation (Clifford & Bostock 2007): *Gk. koryne*, club; *thrix*, hair. Glumes bear capitate hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms 50–85 cm long. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 2–6 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, single or paired or digitate, unilateral, 4–25 cm long. Rhachis angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 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, dorsally compressed, 1.7–2.5 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 surface pubescent, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with capitate hairs, acute. Fertile lemma elliptic, 1.7–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South.

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

Digitaria costaricensis R. W. Pohl. *Fieldiana, Bot.*, 38(2): 5 (1976).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 11215, 8 Oct 1968, Costa Rica: Cartago: 25 km S of El Tejar along the Carretera Interamericana, in roadside ditch, plants very villous, inflorescence branches erect, chromosome determined to be n is 27 elev. 1780 m, 9:45'N, 83:58'W (ISC; IT: CR-61173 & 61178, K, L, MO-2319630, UC, US-2776639).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (184, Fig 60).

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

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 40–80 cm long, 1–3 mm diam. Lateral branches ample. Leaf-sheaths pilose, with tubercle-based hairs or reflexed hairs. Ligule an eciliate membrane, 1.5–2.5 mm long, erose. Leaf-blades 8–15 cm long, 3.5–7 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 4–7, digitate, unilateral, 5–11 cm long, with branchlets at base of longer racemes. Central inflorescence axis 2–3 cm long. Rhachis angular, scabrous on margins. Spikelet packing lax. Spikelets appressed, in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.5–0.7 mm long or 2–3 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 lanceolate, dorsally compressed, acute, 3.5–4 mm long, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.3 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5–7 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7–9 -veined, with equidistant veins, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 3–3.2 mm long, cartilaginous, much thinner on margins, grey, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.9–1.5 mm long, purple.

Distribution (TDWG). Continent. South America.

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

Digitaria cowiei B.K.Simon. *Austrobaileya* 8: 194 (2010).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Northern Territory. Darwin & Gulf: Amungee Mungee Station, 2 May 1991, *I.D.Cowie 1752 & B.A.Wilson* (holo: BRI; iso: DNA).

Illustrations (Journals): *Austrobaileya* (8: 195, Fig.1 (2010)).

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

Habit, Vegetative Morphology. Annual, caespitose. Culms 30–45 cm long, 1–2 -noded. Leaf-sheaths pubescent. Ligule an eciliate membrane, 0.8–1.2 mm long. Leaf-blades 2–8 cm long, 1–3 mm wide. Leaf-blade surface scabrous, pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 4–6, borne along a central axis, flexuous, unilateral, 2.5–3.5 cm long, bearing 20–24 fertile spikelets on each. Central inflorescence axis 3–6 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 0.2–1.2 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, dorsally compressed, 1.6–1.7 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblong, 0.1–0.2 mm long, 0.1 length of spikelet. Lower glume apex obtuse. Upper glume elliptic, 1.3–1.4 mm long, 0.8 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 elliptic, 1.6–1.7 mm long, 1 length of spikelet, membranous, 7 -veined, ciliate on margins, acute. Fertile lemma elliptic, 1.6 mm long, cartilaginous, much thinner on margins, light brown, without keel, 7 -veined, more than 3-veined. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea 1 length of lemma, cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory. Darwin & Gulf.

Digitaria cruciata (Nees) A. Camus. Lecomte, *Fl. Gen. Indo-Chine* 7:399 (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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from Nepal. **Basionym or Replaced Name:** *Panicum cruciatum* Nees ex Steud., *Syn. Pl. Glumac.* 1: 39 (1855)[1853].

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Nepal: 5–8500 ft, *Royle* 28 (HT: ?; ST: K) and 29.

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (729, Fig. 44), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (155), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 760).

Derivation (Clifford & Bostock 2007): L. crux, cross; -ata, possessing; Inflorescence of sub-alternate racemes appearing cross-like as viewed from above.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 50–130 cm long, rooting from lower nodes. Culm-nodes pubescent. Leaf-sheaths glabrous on surface to pilose, with tubercle-based hairs. Ligule an eciliate membrane, 2–3 mm long, truncate. Leaf-blades 10–20 cm long, 5–10 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous to pilose, with tubercle-based hairs. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, digitate, unilateral, 5–18 cm long. Central inflorescence axis 1–4 cm long. Rhachis broadly winged, scabrous on margins. 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 elliptic, dorsally compressed, acute, 2.5–3.5 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet. Lower glume ovate, 0.1 length of spikelet. Upper glume lanceolate or elliptic, 0.5 length of spikelet, membranous, 3 -veined. Upper glume surface smooth, glabrous or pubescent, hairy at apex. Upper glume apex truncate or obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, smooth, pubescent, ciliolate on margins, acute. Fertile lemma elliptic, 2.5–3.5 mm long, cartilaginous, much thinner on margins, pallid or purple, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

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

N = 36 (1 ref TROPICOS).

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

Country /Province /State. China. China South Central, Tibet. **Indian Subcontinent, Indo-China.** Eastern Himalaya, India, Nepal, Sri Lanka. Myanmar, Vietnam.

TDWG4. Guizhou, Hubei, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. Assam, Meghalaya. Punjab, Uttar Pradesh.

Digitaria ctenantha (Muell.) D. K. Hughes. *Kew Bull.* 1923, 310 (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 ctenanthum* F. Muell., *Fragm.* 8: 153 (1874). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *F. Mueller s.n.*, Australia (K).

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (442, Fig 372), J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983) (194(8)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (157, 158 & 632 as *D. robusta*).

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

Derivation (Clifford & Bostock 2007): Gk. ktenos, comb; anthos, flower. The margins of the lower lemma of the stalked spikelets bear widely separated, long stiff hairs.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–60 cm long, 2–5 -noded. Culm-nodes glabrous. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface or pilose, outer margin glabrous. Ligule an eciliate membrane, 0.6–2 mm long. Leaf-blades linear or lanceolate, 3–11 cm long, 2–5 mm wide. Leaf-blade surface scabrous, glabrous or hirsute. Leaf-blade margins scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, spreading, unilateral, 2.5–8.5 cm long, bearing 18–30 fertile spikelets on each. Rhachis narrowly winged, angular, 0.9–1 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.4–0.6 mm long, glabrous, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.6–5.3 mm long, 0.9–1.3 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.8 mm long, 0–0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume lanceolate, 2.7–3.8 mm long, 0.6–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, prominently veined, with unevenly spaced veins, pilose or setose, hairy between veins but central interspaces glabrous, acuminate. Fertile lemma lanceolate, 3.6–5.3 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Western Australia, Northern Territory, South Australia, Queensland.

TDWG4. Kimberley, Eremean. NW & Lake Eyre. North, Central, Inland.

Digitaria cuatrecasasii A.S.Vega & Rúgolo. *Darwiniana* 43(1–4): 244 (-247, 234–237; fig. 4) (2005).

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

TYPE from Colombia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Colombia, Loma de Barragan: Cuatrecasas 20661 (US holo).

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

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–40 cm long, 1–1.3 mm diam. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths 2–3.5 cm long, pubescent, outer margin hairy. Ligule an eciliate membrane, 2 mm long, erose, truncate. Leaf-blades 5.5–23 cm long, 3.5–4.5 mm wide, dark green. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 4.5–15 cm long. Central inflorescence axis 0.7–1.2 cm long. Rhachis angular, 0.5 mm wide, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, 0.5–3.5 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, 2.2–2.5 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 elliptic, 1.3–1.7 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins transversely connected at apex. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, glabrous, acute. Palea of lower sterile floret 0.5 mm long. Fertile lemma elliptic, 2.2–2.5 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Lodicules 2, cuneate, 0.2 mm long, membranous, truncate. Anthers 3, 0.8–1.1 mm long. Caryopsis with adherent pericarp, ellipsoid, 1.2–1.3 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Digitaria curtigluma Hitchcock. *Proc. Biol. Soc. Wash.* 40: 84 (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 8176, 28 Sep 1911–07 Oct 1911, Panama: Chiriquim: El Boquete, 1000 to 1300 m (US-927689; IT: K, L, SI).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (159).

Illustrations (Journals): *Darwiniana* (45: 100, Fig.2 (2007)).

Derivation (Clifford & Bostock 2007): L. curtus, short; gluma, husk. Upper glume short.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–150 cm long. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 20–44 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, unilateral, 5–15 cm long. Central inflorescence axis 2–7 cm long. Rhachis narrowly winged, angular, 0.5–0.7 mm wide. Spikelet packing lax. Spikelets solitary or in pairs. Fertile spikelets sessile or sessile and pedicelled. Pedicels present, 2–3 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, acute, 2.3–2.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic or oblong, 0.6–0.8 mm long, 0.25–0.33 length of spikelet, membranous, without keels, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume surface glabrous. Upper glume apex emarginate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.8 length of spikelet, membranous, 3–5 -veined, pubescent, hairy below, with capitate hairs, acute. Fertile lemma elliptic, 2.3–2.7 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico, Southeast Mexico. Mesoamerica, Western South America. Honduras, Panama. Colombia.

TDWG4. Distrito Federal, Mexico State, Puebla. Guanajuato. Jalisco, Michoacan, Oaxaca. Chiapas.

Digitaria curvinervis (Hack.) Fernald. *Rhodora*, 22: 103 (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. **Basionym or Replaced Name:** *Panicum curvinerve* Hack., *Oesterr. Bot. Z.* 51: 335 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: C. Wright 1544, 1865, Cuba (GOET; IT: MO-2100884, NY-71094, US-80585 in part (fragm.), W-23165).

Illustrations (Books): G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 137, Fig. 11 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (161).

Derivation (Clifford & Bostock 2007): L. curvus, bent; nervus, nerve. The nerves of the upper glume and sterile lemma are conspicuously bent towards the midrib.

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

Habit, Vegetative Morphology. Annual. Culms slender, 20–60 cm long. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane. Leaf-blades 4–11 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 2–10 cm long. Central inflorescence axis 1–5 cm long. Rhachis angular. Spikelets appressed, 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, dorsally compressed, 1.5(–2) mm long, 0.5 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, hyaline, without keels, 3 -veined. Upper glume lateral veins prominent, meeting at apex. 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, 5 -veined, prominently veined, with veins meeting and uniting at apex, glabrous, acute. Fertile lemma elliptic, 1.5(–2) mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean, Northern South America, Western South America. Honduras, Panama. Cuba, Dominican Republic. Venezuela. Peru.

Digitaria cuyabensis (Trin.) Parodi. *Physis*, 8: 378 (1926).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 cuyabense* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 3,1(2–3): 206 (1834)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L. Riedel s.n.*, Brazil (LE-TRIN-0660.01; IT: B, BAA-637 (fragm. ex B), US-80586).

Recent Synonyms: *Digitaria malacophylla* (Hitchc.) Henrard, *Meded. Herb. Leid.* No. 61, 4 (1930).

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (Fig. 121), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (365, Fig. 152), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (482, Fig. 124), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (100, Fig. 26), B.Rosengurt, *Gramineas Uruguayas I* (1970) (304, Fig. 128), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (164).

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

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

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms erect or geniculately ascending, 50–100 cm long, 2.5–3 mm diam., 6–8 -noded. Culm-nodes brown, glabrous or pubescent. Leaf-sheaths 6–9 cm long, glabrous on surface or pilose. Ligule an eciliate membrane, 2.5 mm long, erose. Leaf-blades 5–15 cm long, 3–5 mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–14, digitate, unilateral, 7–13 cm long, simple or secondarily branched. Central inflorescence axis 3–5 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.9 mm long or 3 mm long, scabrous.

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

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 2.8–2.9 mm long, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface puberulous, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, puberulous, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 2.8 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1.5–1.8 mm long. Caryopsis with adherent pericarp, ovoid, 1.2–1.3 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Northern South America, Western South America, Brazil, Southern South America. Panama. French Guiana, Guyana, Surinam. Bolivia. Brazil West Central, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Salta. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, Santa Fe.

Digitaria debilis (Desf.) Willd. *Enum. Hort. Berol.* 91 (1809).

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 Algeria. **Basionym or Replaced Name:** *Panicum debile* Desf., *Fl. Atlant.* 1: 59 (1798)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *R.L. Desfontaines s.n.*, no date, Algeria (US-1126048 (fragm.)).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (108, Fig 64), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (371, Fig 138), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (255, Fig 102), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (206, Fig. 139 as *Paspalum*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (168 & 169 *D.ebilis* var. *reimarioides*).

Derivation (Clifford & Bostock 2007): L. weak. Culms decumbent often much branched at the base.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–60 cm long. Ligule an eciliate membrane. Leaf-blades 3–13 cm long, 2–6 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–12, digitate or borne along a central axis, unilateral, 3–16 cm long. Central inflorescence axis 0–6 cm long. Rhachis wingless, angular. 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 lanceolate, dorsally compressed, (2–)2.4–3.6(–4.5) mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.1–0.3 mm long.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.7–3.5 mm long, 0.7–0.8 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, with hooked hairs (curled tip), acute. Fertile lemma elliptic, 2–4.5 mm long, cartilaginous, much thinner on margins, grey or purple, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Europe, Africa, South America.

Region. Southwestern Europe, Southeastern Europe.

Country /Province /State. : Portugal, Spain. : Italy. **Northern Africa, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Tunisia. Ghana, Mali, Nigeria, Senegal, Sierre Leone. Cameroon, DRC. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal, Western Cape. Madagascar. **Caribbean.** Cuba.

Digitaria delicata Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 398 (1975).

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

TYPE from Mali. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mali, Deben: Dalebroux 4013 (BR holotype).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950).

Derivation (Clifford & Bostock 2007): L. delicate. Habit delicate.

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 20–30 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane, 1–1.5 mm long, truncate. Leaf-blades 3–10 cm long, 2–4 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade margins cartilaginous, scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, digitate, unilateral, 3–6 cm long. Rhachis narrowly winged, angular, glabrous on surface, ciliate on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 0.2–2 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, 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, 0.95 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins but central interspaces glabrous, with capitate hairs, acute. Fertile lemma oblong, 2–2.2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria delicatula Stapf. Prain, *Fl. Trop. Afr.* 9: 454 (1919).

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

TYPE from Nigeria. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *MacGregor 210*, Nigeria: along water near Lagos (K; IT: P). LT designated (as type) by Henrard, *Monogr. Digitaria* 174 (1950).

ST: *Chevalier 17149*, Ivory Coast: Adioukrou country, Dabon (P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (173).

Derivation (Clifford & Bostock 2007): *L. delicatus*, dainty; -ula, diminutive. Small and dainty as of habit.

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

Habit, Vegetative Morphology. Annual. Culms erect, 30–60 cm long. Culm-nodes bearded. Ligule a ciliolate membrane. Leaf-blades flat or convolute, 10–25 cm long, 1.5–3 mm wide. Leaf-blade surface scaberulous, hirsute. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, erect, flexuous, unilateral, 10–15 cm long. Rhachis wingless, angular, 0.3–0.4 mm wide. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 2–2.5 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 oblong, dorsally compressed, acute, 1.7–2.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy on veins, with clavate hairs. Upper glume hairs red. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pubescent, with clavate hairs, bearing red hairs, acute. Fertile lemma ovate, 1.7–2.2 mm long, cartilaginous, much thinner on margins, black, shiny, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa. Benin, Burkina, Ghana, Ivory Coast, Mali, Nigeria, Senegal. Gabon.

Digitaria diagonalis (Nees) Stapf. Dyer, *Fl. Cap.* 7: 381 (1898).

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 diagonale* Nees, *Fl. Afr. Austral. Ill.* 23 (1841)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *J.F. Drige s.n.*, no date, South Africa: Natal (B, K, L, US-1126031).

ST: *Drige 1432*, South Africa (P).

ST: *Drige 4312*, South Africa (K, P).

ST: *Drige 4313*, South Africa (K, P).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (234, Fig. 159 as *D. uniglumis*), W. Robyns (1929 and 1934). *Flora Agrostologique du Congo Belge et du Ruanda-Urundi*, I. Maydees et Andropogonees and II. Panicees. Bruxelles, Goemaere (53, Pl. 21, as *D. uniglumis*), F.N.Hepper,

F.W.T.A. 3(2) (1972) (451, Fig.444), R.M.Phill, F.T.E.A., *Gramineae* (3(1982):425, Fig. 145), G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, T. 38), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (420, Fig. 34), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (109, Fig. 65), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (249, Fig. 100), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (301, 757 & 767 as *D. grantii*, *D. trichopodia*, *D. uniglumis*).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. diagonal. Ligule apex oblique.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 40–300 cm long. Ligule an eciliate membrane. Leaf-blades 10–60 cm long, 1–12 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 4–50, borne along a central axis, spreading or ascending, unilateral, 3–25 cm long. Central inflorescence axis 5–40 cm long. Rhachis angular, glabrous on margins or setose on margins. Spikelets in pairs or clustered at each node. Fertile spikelets pedicelled, 2–6 in the cluster. Pedicels present, setose, 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 oblong, dorsally compressed, 1.2–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblate, 0.1–0.7 mm long, 0.1–0.33 length of spikelet, hyaline, 0 -veined. Upper glume primary vein absent. Upper glume apex truncate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.8–1 length of spikelet, membranous, 3(–7) -veined, glabrous, obtuse. Fertile lemma elliptic, 1.2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Ghana, Ivory Coast, Nigeria, Senegal, Sierra Leone, Togo. Cameroon, Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Eastern Cape. **Arabian Peninsula.** Yemen.

Digitaria didactyla Willd. *Enum. Hort. Berol.* 91 (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), 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), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Mauritius. **Basionym or Replaced Name:** *Digitaria swazilandensis* Stent, *Bothalia*, 3: 150 (1930). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Bory de St. Vincent s.n.*, Mauritius (B-W-1646; IT: BM).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (as *D. swazilandensis*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (397, Fig. 334 as *D. swazilandensis*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (379, Fig. 142), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (53, Fig. 43), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (71, Pl. 25), 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) (377), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (216), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(10)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (104, 113, 182, 725, & 761 as *D. caespitosa*, *D. camusiana*, *D. didactyla* var. *decalvata*, *D. peninsulae*, *D. swazilandensis*, *D. truncata*).

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): Gk. dis, twice; daktylos, finger. Inflorescence of two racemes.

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

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated, knotty. Culms prostrate, 15–30 cm long. Culm-nodes brown, glabrous. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule an

eciliate membrane, 0.8 mm long. Leaf-blades 3–6(–10) cm long, 3–6 mm wide, glaucous. Leaf-blade surface smooth, glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3(–4), paired or digitate, unilateral, 3–10 cm long. Rhachis wingless or narrowly winged, with sharp-edged midrib, angular, 0.6 mm wide, smooth on surface, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, terete or angular, unequal, 0.5–2.5 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 or oblong, dorsally compressed, (2–)2.2–2.7 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume ovate, 0.33–0.5 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 lanceolate, 1 length of spikelet, membranous, 7 -veined, smooth or scaberulous, rough on veins, pubescent, acute. Fertile lemma lanceolate, 2–2.7 mm long, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **South tropical Africa, Southern Africa** (*), **Western Indian ocean.** Malawi, Mozambique. Limpopo, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal. Mauritius, Madagascar, Rodrigues, Seychelles. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Sri Lanka. Vietnam. Java, Malaya, Sumatra, Singapore. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Australia.** Western Australia (*), Queensland (*), New South Wales (*). **Southwestern Pacific.** Fiji (*), New Caledonia (*), Tonga (*). Cook Is (*). **Southeastern USA.** Florida.

TDWG4. South-West. North, Central, South East. Coast, Western Slopes.

Digitaria diffusa Vickery. *Contrib. N. S. Wales Nat. Herb.* 3: 84 (1961).

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: Upper Colo, Mar 1950, *Vickery s.n.* (HT: NSW-11017).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler,, *Grasses of New South Wales*, 4th edn (2008) (216), J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983) (194(11)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

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

Derivation (Clifford & Bostock 2007): L. widely spreading. Inflorescence an open panicle.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, slender, 10–40 cm long, rooting from lower nodes. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths 2–5 cm long, striately veined, glabrous on surface or pilose. Ligule an eciliate membrane, 1–2 mm long, truncate. Leaf-blades 1.5–8 cm long, 0.75–3 mm wide. Leaf-blade midrib indistinct or evident. Leaf-blade surface glabrous or pubescent. Leaf-blade margins entire or undulate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, spreading, unilateral, 3–7 cm long. Central inflorescence axis 3–5 cm long. Rhachis angular. Spikelet packing distant. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. 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, acute, 1.5–1.75 mm long, 0.75 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1–0.25 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. 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 elliptic, 1 length of spikelet, membranous, 5–7 -veined, pubescent, hairy between veins or between veins but central

interspaces glabrous, acute. Fertile lemma elliptic, 1.5–1.75 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

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

Region. Northern Europe (*).

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

TDWG4. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Digitaria diminuta Hughes. *Bull. Misc. Inform. Kew* 1923 (9): 312 (1923).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Ker s.n.*, Australia: New South Wales: McIntyre River (K).

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

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

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

North, Central, South East. Coast, Tablelands.

Digitaria dioica T.J. Killeen & Z.E. Rugolo de Agrasar. *Syst. Bot.*, 17(4): 603 (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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *T. Killeen 1192*, 11 September 1985, Bolivia: Santa Cruz (MO!).

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

Derivation (Clifford & Bostock 2007): Gk. dis, twice; oikos, house. The male and female spikelets occur on different plants or in different spikelets on the same plant.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths thickened and forming a bulb, pilose, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 45–85(–100) cm long. Leaves mostly basal. Ligule an eciliate membrane. Leaf-blades flat or involute, 10–60 cm long, 2–4(–7) mm wide. Leaf-blade surface glabrous or pubescent. Leaf-blade apex acuminate. Dioecious.

Inflorescence. Inflorescence composed of racemes. Racemes 3–8, digitate or borne along a central axis, unilateral, 3–12(–23) cm long, with branchlets at base of longer racemes, secondary branches racemulose (1–2cm). Central inflorescence axis 2–15 cm long. Rhachis angular. Spikelets clustered at each node. Fertile spikelets pedicelled, 3–10 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, dorsally compressed, 2.8–3.8 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.5 mm long, 0.15 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5–7 -veined, pilose, acuminate. Fertile florets female. Fertile lemma lanceolate, 2.5–3.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Male inflorescence similar to female. Male spikelets resembling female.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia, Colombia. Brazil West Central.

Digitaria distans (Chase) Fernald. *Rhodora*, 22: 103 (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 Mexico. **Basionym or Replaced Name:** *Syntherisma distans* Chase, *Contr. U.S. Natl. Herb.* 17(3): 220 (1913)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Hitchcock 7376*, 29 Sep 1910, Mexico: Jalisco: vicinity of Orozco (US-691225).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (194).

Derivation (Clifford & Bostock 2007): L. disto, be apart. Spikelets widely separated in inflorescence.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 60–70 cm long. Culm-nodes bearded. Leaf-sheaths hirsute. Ligule an eciliate membrane, 2 mm long. Leaf-blades 3–6 cm long, 2 mm wide. Leaf-blade surface scabrous, glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, unilateral, 6–11 cm long. Rhachis angular. Spikelet packing lax. 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 oblong or ovate, dorsally compressed, acuminate, 3 mm long, 1 mm wide, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.1–0.5 mm long, 0.05–0.15 length of spikelet, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 3 mm long, 1 length of spikelet, membranous, without keels, 7 -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, 7 -veined, glabrous, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

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

Country /Province /State. Mexico. Southwest Mexico. **Brazil.** Brazil Southeast.

TDWG4. Minas Gerais, Rio de Janeiro, Espirito Santo. Jalisco.

Digitaria divaricatissima (R.Br.) D. K. Hughes. *Kew Bull.* 1923, 314 (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), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum divaricatissimum* R. Br., *Prodr.* 192 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R. Brown 6118*, Australia: Port Jackson (BM; IT: K).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass.* Grasses of Australia. CD-Rom Version 1.0. (2002), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (217), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(13)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (197, 199 & 416 as var. *dasyantha*, *D. macractinia*).

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

Derivation (Clifford & Bostock 2007): L. divarico, spread out; -issima, most. Panicle, large and diffuse.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths thickened and forming a bulb, pubescent or villous. Culms erect or geniculately ascending, 15–60 cm long. Leaf-sheaths pubescent or hirsute. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 4–15 cm long, 3–6 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes, deciduous as a whole. Peduncle fracturing. Racemes 4–10, digitate or borne along a central axis, radiating, unilateral, 8–35 cm long. Central inflorescence axis 0–10 cm long. Rhachis wingless, angular. Spikelet packing distant. Raceme-bases filiform, 10–90 mm 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 lanceolate, dorsally compressed, acute or acuminate, 3.75–5 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1–0.25 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins ribbed. Upper glume surface villous, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5–7 -veined, ribbed, with unevenly spaced veins, villous, acute. Fertile lemma elliptic, 3–4.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Region. Northern Europe (*).

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

TDWG4. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Digitaria diversinervis (Nees) Stapf. Dyer, *Fl. Cap.* 7: 379 (1898).

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 diversinerve* Nees, *Fl. Afr. Austral. Ill.* 23 (1841)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J. F. Drhge*, s.d., South Africa: Natal: alt. 61 m. (B; IT: US-1126034 (fragm.)).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (398, Fig 335), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (200 & 201 as var. *woodiana*).

Derivation (Clifford & Bostock 2007): *L. diversus*, variable; *nervus*, nerve. The upper and lower glumes have different numbers of nerves.

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

Habit, Vegetative Morphology. Perennial, mat forming. Rhizomes elongated, knotty. Stolons present. Culms 22–35 cm long. Ligule an eciliate membrane. Leaf-blades 20–90 cm long, 3–8 mm wide. Leaf-blade surface glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, unilateral, 3–4 cm long. Rhachis narrowly winged, angular. Spikelets 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 rachilla extension. Spikelets 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 mm long, 1 mm wide, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–1 mm long, 0.1–0.2 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.5–0.66 length of spikelet, membranous, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. 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, 7–11 -veined, ribbed, scaberulous, rough above or on veins, glabrous, eciliate on margins or ciliolate on margins, acute. Fertile lemma lanceolate, 3–4 mm long, chartaceous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. *N* = 18 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. **Southern Africa.** Limpopo, Gauteng, Mpumalanga, Kwazulu-Natal, Western Cape.

Digitaria doellii Mez. *Engl. Jahrb.* 56 Beibl. 8 (1921).

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: ST: *Ule 4157*, Brazil: Rio de Janeiro: Rio de Janeiro (B?).

ST: *Schott 4849*, Brazil: Rio de Janeiro (B; IST: BAA-547 (fragm. ex B)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (203).

Derivation (Clifford & Bostock 2007): in honor of Johann Christoph Doell (1808–85) German botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Culms 45–80 cm long, 2 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath auricles erect. Ligule an eciliate membrane, 2–3 mm long, brown. Leaf-blades 5–25 cm long, 4–7 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially. Leaf-blade margins cartilaginous, crenate.

Inflorescence. Inflorescence composed of racemes. Racemes 8–16, digitate, unilateral, 8–12 cm long. Central inflorescence axis 7–12 cm long. Rhachis angular. 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 elliptic, dorsally compressed, 2.75 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.6 mm long, 0.2 length of spikelet. Upper glume lanceolate, 2.25 mm long, 0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 2.75 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Northeast, Brazil Southeast. Minas Gerais, Rio de Janeiro, Espirito Santo.

Digitaria dolichophylla Henrard. *Blumea*, 1: 94 (1934).

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.A. Eaton 459, 5 Dec 1903, USA: Florida: Dade Co.: Buena Vista (L-908,92-581; IT: US).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (204).

Derivation (Clifford & Bostock 2007): Gk. dolichos, narrow; phyllon, leaf. Leaf-blades long and narrow.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, slender, 30-115 cm long, wiry. Ligule an eciliate membrane. Leaf-blades flexuous, conduplicate or involute, 1 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1-3, single or paired or digitate, erect, unilateral, 5-20 cm long. Rhachis angular. Spikelet packing lax. 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 elliptic, dorsally compressed, 1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.75 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, pubescent, hairy between veins but central interspaces glabrous, with capitate hairs, acute. Fertile lemma oblong or ovate, 1.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Florida.

Digitaria dolleryi B.K.Simon. *Austrobaileya* 8: 196 (2010).

TYPE from Australia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Queensland. Warrego District: Chesterton National Park, 18 April 2002, *C.Dollery 354* (holo: BRI).

Illustrations (Journals): *Austrobaileya* (8: 195, Fig.1 (2010)).

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

Habit, Vegetative Morphology. Annual. Culms erect or decumbent, 20-40 cm long, 3-5 -noded. Ligule an eciliate membrane, 0.5-0.8 mm long. Leaf-blades 1-2.5 cm long, 1-2 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2-5, borne along a central axis, unilateral, 2-5 cm long, bearing 22-26 fertile spikelets on each. Central inflorescence axis 1-3 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 1-5 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, dorsally compressed, 2-2.3 mm long, 0.9-1.2 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.7 mm long, 0.33 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper

glume oblong, 1.9–2 mm long, 0.9 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 oblong, 1.8–2.1 mm long, 0.9 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins but central interspaces glabrous, ciliate on margins. Fertile lemma lanceolate, 1.8–2.1 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute or acuminate. Palea 1 length of lemma, cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.
Inland.

Digitaria dunensis Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 416 (1975).

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, Nkhota Kota: Verboom 989 (BR holo, BM, K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From dunes on the shore of Lake Nyasa.

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

Habit, Vegetative Morphology. Perennial, mat forming. Culms prostrate, 20–40 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.2–0.5 mm long, erose. Leaf-blades 3–7 cm long, 2–5 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade margins entire or crenate, smooth or scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes (3–)7–13, borne along a central axis, erect, unilateral, 2–4 cm long. Rhachis wingless, angular, smooth on margins or scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–2.5 mm long, smooth or scaberulous, 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 oblong, dorsally compressed, 2.3–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 0.75–0.8 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 oblong, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma oblong, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown or dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute or acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria dusenii Chase ex S.A. Renvoize. *Kew Bull.*, 42(4): 923 (1987).

Regarded by K as a synonym (*D. purpurea*).

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

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Parana: Fortaleza, *Jvnsson 1287a* (HT: K; IT: S).

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

Derivation (Clifford & Bostock 2007): in honor of Per Karl Hjalmar Dusen (1855–1926) Swedish civil engineer and traveller who collected in Africa, Greenland and South America.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pilose, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 40–80 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades filiform or linear, involute, 7–13 cm long, 0.5–3 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, single or paired or digitate, flexuous, unilateral, 3.5–7 cm long, simple or secondarily branched. Rhachis angular, smooth on margins. Spikelet packing lax. 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 ovate, dorsally compressed, 3–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 2–3 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume hairs black. 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 -veined, pubescent, hairy between veins but central interspaces glabrous, bearing black hairs, acute. Fertile lemma ovate, 3–4 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 2.5 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

TDWG4. Goias, Sao Paulo Parana.

Digitaria duthieana Henrard ex Bor. *Kew Bull.* 1953, 273 (1953).

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: India, Jhansi: Duthie (K holo).

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

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of John Firminger Duthie (1845–1922) English botanist who collected in India.

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

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Stolons present. Butt sheaths pubescent. Culms decumbent, 10–20 cm long, rooting from lower nodes. Leaf-sheaths hirsute. Ligule an eciliate membrane, 1 mm long. Leaf-blades 2.5–5 cm long, 2.5–3 mm wide. Leaf-blade surface scaberulous, pilose, sparsely hairy, hairy on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 2.5–3 cm long. Rhachis narrowly winged, angular, 0.75 mm wide, glabrous on surface, scabrous on margins. 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 elliptic, dorsally compressed, acute, 2.5 mm long, 0.75 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure. Upper glume ovate or orbicular, 0.3 mm long, 0.1 length of spikelet, membranous, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume surface glabrous. Upper glume margins ciliate. 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, glabrous, ciliate on margins, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, purple, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Digitaria effusa J.F. Veldkamp. *Blumea*, 44(2): 447 (1999).

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

TYPE from Vietnam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Vietnam: Lam Dong Province: 2 km S of Da, 11.54.9N, 108.25.7E, *J.B. Hacker 1613* (HT: L).

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

Derivation (Clifford & Bostock 2007): L. spread out. Inflorescence an open panicle.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Culms decumbent, 25–35 cm long, rooting from lower nodes. Culm-nodes glabrous. Leaf-sheaths pilose, outer margin hairy. Ligule an eciliate membrane, 1 mm long, erose. Leaf-blades 4–8 cm long, 6–8 mm wide. Leaf-blade venation with 7 secondary veins. Leaf-blade surface pilose. Leaf-blade margins smooth, ciliate, hairy at base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–8, digitate, unilateral, 3–5 cm long. Central inflorescence axis 1–3 cm long, glabrous. Rhachis angular, glabrous on surface, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, scaberulous, ciliate, hairy on margins, 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, 1.8–2 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet. Lower glume ovate, 0.25–0.3 mm long, 0.15 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic, 1.4–1.5 mm long, 0.75–0.8 length of spikelet, membranous, 3 -veined. Upper glume lateral veins without cross-veins. 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, 7 -veined, with equidistant veins, without cross-veins, glabrous, acute. Fertile lemma elliptic, 1.8–2 mm long, cartilaginous, much thinner on margins, pallid or yellow, shiny, without keel. Lemma surface smooth. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.9 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia.

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

Digitaria eggersii (Hackel) Henrard. *Blumea*, 1: 97 (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 Virgin Islands. **Basionym or Replaced Name:** *Panicum eggersii* Hack., *Oesterr. Bot. Z.* 51: 292 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *H.F.A. von Eggers* 295, no date, Virgin Islands: St. Thomas I. (L, US-927353, US-741749, US-1720122, US-80634 (fragm.)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (207).

Derivation (Clifford & Bostock 2007): in honor of Heinrich Franz Alexander Eggers (1844–1908) German-born Danish military officer and plant collector in the West Indies and South America.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, slender, 20–40 cm long. Lateral branches sparse. Ligule an eciliate membrane. Leaf-blades 1–5 cm long, 2–4 mm wide. Leaf-blade surface puberulous. Leaf-blade margins cartilaginous, crenate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 2–5 cm long. Central inflorescence axis 0–0.5 cm long. Rhachis angular. 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 elliptic, dorsally compressed, 3–4 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5–7 -veined, prominently veined, villous, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 3–4 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 1.4 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Leeward Is.

Digitaria ekmanii Hitchcock. *U. S. Dept. Agric., Misc. Publ. No.* 243:176 (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: *E. L. Ekman s.n.*, 26 Jun 1922, Cuba: Prov. Pinar del Rmo: wet places in pinelands (US-1161280; IT: L, MO, SI).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (212 & 213 as var. *curtissii*).

Derivation (Clifford & Bostock 2007): in honor of Erik Leonard Eckman (1888–1931) Swedish botanist.

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

Habit, Vegetative Morphology. Perennial. Culms decumbent, 50–100 cm long, rooting from lower nodes. Culm-internodes distally glabrous. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, 3 mm long. Leaf-blades 5–15 cm long, 2–4 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 7–10, digitate, flexuous, unilateral, 7–12 cm long. Central inflorescence axis 2–3 cm long. Rhachis angular, 0.3 mm wide. Spikelets appressed, in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 2–3 mm long (longer pedicel).

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, acute, 2.5 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. 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, glabrous, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Digitaria eminens (Steud.) Backer. K. Heyne, *Nutt. Pl. Ned.-Ind.* ed. 2, 156 (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, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Indonesia. **Basionym or Replaced Name:** *Panicum eminens* Steud., *Syn. Pl. Glumac.* 1: 37 (1855) [1853]

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *H. Zollinger* 2783, 1846, Indonesia: Java (P; IT: B, BM, US-1445806, US-1126047 (fragm. ex B)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (220 & 221).

Derivation (Clifford & Bostock 2007): *L. emineo*, stand out. Conspicuous with respect to inflorescence.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 100–200 cm long. Lateral branches ample. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.6–3 mm long, erose, truncate or obtuse. Leaf-blades 7.5–12.5 cm long, 5–7(–10) mm wide. Leaf-blade surface scabrous, glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3(–5), paired or digitate, unilateral, 10–24 cm long. Central inflorescence axis 0–1.2 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6.25 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.25–1 mm long, 0.05–0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic, 3–4.5 mm long, 0.65–0.8 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, 9–11 -veined, glabrous, villous on margins, acute. Fertile lemma elliptic, 4.5–6 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Java.

Digitaria enodis (Hack. ex Arechav.) Parodi. *Physis (Buenos Aires)* 8: 378 (1926).

Accepted by: 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 enode* Hack. ex Arechav., *Anales Mus. Nac. Montevideo* 1: 75 (1894)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Arechavaleta* 132, Jan 1877, Uruguay: Campos gramíneos (W-31206; IT: SI (photo)).

Illustrations (Books): B.Rosengurtt, *Gramineas Uruguayas I* (1970) (302, Fig. 127), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (226).

Illustrations (Journals): *Darwiniana* (19: 106, Fig. 9 (1974)).

Derivation (Clifford & Bostock 2007): L. e-, without; nodus, knot. Internodes very short.

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

Habit, Vegetative Morphology. Perennial. Rhizomes short. Basal innovations intravaginal. Culms 15–30 cm long, 1-noded. Culm-nodes brown. Lateral branches lacking. Leaf-sheaths 6–18 cm long, glabrous on surface or pilose. Ligule an eciliate membrane, 1–1.5 mm long, brown, lacerate, truncate. Leaf-blades filiform, involute, 6–12 cm long, 1 mm wide. Leaf-blade surface scabrous, rough abaxially, glabrous or pubescent, hairy abaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pilose above. Racemes 2–3, paired or digitate, unilateral, 4–8 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs or in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 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, 2.5–3 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2–0.3 mm long, 0.1 length of spikelet, hyaline, 0-veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 2–2.1 mm long, 0.75 length of spikelet, membranous, without keels, 3-veined. Upper glume surface pubescent, hairy between veins. Upper glume hairs dark brown. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret lanceolate, 0.9–1 length of spikelet, membranous, 5-veined, pilose, hairy between veins but central interspaces glabrous, bearing dark brown hairs, acute. Palea of lower sterile floret 0.5–0.8 mm long. Fertile lemma elliptic, 2.5–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1.8 mm long. Caryopsis with adherent pericarp, 2 mm long. Hilum punctiform.

Distribution (TDWG). Continent. South America.

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

Digitaria eriantha Steud. *Flora*, 12: 468 (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), 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 *D. pentzii*), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from South Africa. **Basionym or Replaced Name:** *Digitaria decumbens*, *D. pentzii*, *D. setivalva*, *D. valida*, *D. stentiana*. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *von Ludwig s.n.*, South Africa: Cape: Cape of Good Hope.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, T. 41), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (410, Fig 342 as *D. pentzii* var. *stolonifera*), M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (106, Fig 63), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (as *D. didactyla*), 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) (377), J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983) (194(4)(9) as *D. decumbens*), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (898, Fig. 182 as *D.decumbens*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (97, Fig. 25 as ssp. *pentzii*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 139, Fig. 12 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (228, 172, 189, 232, 283, 319, 407, 489, 542, 700 & 772 as *D.decumbens*. *D. dinteri*, *D. eriantha* var. *stolonifera*, *D. geniculata*, *D. hiascens*, *D. livida*, *D. nemoralis*, *D. pentzii*, *D. smutsii*, *D. valida*).

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): Gk. erion, wool; anthos, flower. With wooly glumes, lemmas or awns.

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

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Stolons absent or present. Butt sheaths sparsely hairy, persistent and investing base of culm, with compacted dead sheaths. Culms erect or geniculately ascending, 40–120 cm long. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths scaberulous, glabrous on surface or pilose. Ligule a ciliolate membrane, 2–4 mm long. Leaf-blades flat or involute, 5–20 cm long, 2–4(–7) mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, digitate, in several whorls, erect, unilateral, 5–20 cm long. Rhachis narrowly winged, angular, 0.5 mm wide, smooth on surface or scabrous on surface, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, terete or angular, unequal, 0.5–2.5 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, 2.2–3.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.5 mm long, 0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume margins ciliate. Lower glume apex acute or acuminate. Upper glume oblong, 0.5–0.66 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 oblong, 1 length of spikelet, membranous, 7 -veined, smooth, pubescent or pubescent or setose, acute. Fertile lemma oblong, 2–3 mm long, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. $2n = 40$ (1 ref TROPICOS).

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **West-central tropical Africa, South tropical Africa, Southern Africa.** Angola, Mozambique, Zimbabwe, Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Northern Cape, Western Cape, Eastern Cape. **Malesia.** Malaya, Philippines. **Australia.** Western Australia (*), Queensland (*). **North-central Pacific.** Fiji (*), New Caledonia, Caroline Is (*). Hawaii (*). **Southwestern USA, Southeastern USA, Mexico.** Arizona, California. Florida. Northeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Colombia, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.

TDWG4. North, Central, South East. Chaco, Corrientes, La Pampa, Misiones. Zacatecas.

Digitaria eriostachya Mez. *Engl. Jahrb. 56 Beibl.* 125, 8 (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 Paraguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: B. Balansa 146, 18 Dec 1876, Paraguay: Paraguari: dans les pcurages (B?; IT: BAA (fraG, US-1445590 (ex G)m.), G).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (360, Fig. 150), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (482, Fig. 124), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (100, Fig. 26), B.Rosengurtt, *Gramineas Uruguayas I* (1970), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (235 & 244 as *D. fallens*).

Illustrations (Journals): *Darwiniana* (19: 139, Fig. 21 (1974)).

Derivation (Clifford & Bostock 2007): Gk. erion, wool; stachys, ear of corn. Inflorescence branches or spikelets densely hairy.

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

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 20–100 cm long, rooting from lower nodes. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths 2–12 cm long, glabrous on surface or pilose. Ligule an eciliate membrane, 2–3 mm long, lacerate. Leaf-blades lanceolate, 2–10 cm long, 2–8 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, digitate, unilateral, 7–10 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, 0.5–2 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 lanceolate, dorsally compressed, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 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 lanceolate, 1 length of spikelet, membranous, 5–7 -veined, pilose, hairy between veins but central interspaces glabrous, acute. Fertile lemma lanceolate, 2 mm long, cartilaginous, much thinner on margins, yellow or purple, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1 mm long, purple. Caryopsis with adherent pericarp, ovoid, 1 mm long. Embryo 0.4 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central, Brazil South. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Chaco, Corrientes, Entre Rios, Misiones, Santa Fe.

Digitaria evrardii Van der Veken. *Bull. Jard. Bot. Brux.* 28: 88 (1958).

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: Belgian Congo: Dist. l'Ubangi-Uele: route Baya-Pandu, pres de Seavolo, dalle laterique, plante herbacee dresse, annuelle, 50 cm de haut, Jul 1957, *Evrard 2485* (HT: BR).

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

Derivation (Clifford & Bostock 2007): In honor of Charles Marie Evrard (1926-) Belgian botanist.

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 40–80 cm long, 2–5 -noded. Culm-nodes black. Leaf-sheaths pubescent, with tubercle-based hairs. Ligule an eciliate membrane, 0.3 mm long. Leaf-blades 3–8 cm long, 2–6 mm wide. Leaf-blade surface pubescent, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade margins cartilaginous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–18 cm long. Rhachis angular, scaberulous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, angular, unequal, 0.4–4 mm long, scaberulous, pubescent, hairy at tip, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic or oblong, dorsally compressed, 2.5–2.8 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 1–1.3 mm long, 0.5 length of spikelet, hyaline, 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 ovate, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma ovate, 2.2–2.3 mm long, cartilaginous, much thinner on margins, pallid, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface granulate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1.5 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Digitaria exilis (Kippist) Stapf. *Kew Bull.* 1915, 385 (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 Sierra Leone. **Basionym or Replaced Name:** *Paspalum exile* Kippist, *Proc. Linn. Soc. Lond.* 1: 157 (1842)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *R. Clarke s.n.*, 1842, Sierra Leone: cultivated in the village of Kissy and neighborhood of Waterloo (US-2433074; US-1126049 (fragm. ex BM)).

HT?: *Schon s.n.*, Sierra Leone (K).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (238).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3068 (1916)).

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

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–80 cm long, 5–8 -noded. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 3–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, erect, unilateral, 4–15 cm long. Rhachis broadly winged, with rounded midrib, 0.5–1 mm wide. Spikelets in pairs or in threes or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present, terete, unequal, 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, acute, 1.7–2 mm long, persistent on plant.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 0.9 length of spikelet, membranous, without keels, 3–5 -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, 7 -veined, ribbed, with equidistant veins or with unevenly spaced veins, glabrous, obtuse. Fertile lemma elliptic, 1.7–2 mm long, cartilaginous, much thinner on margins, pallid or grey, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa. Burkina, Gambia, Ghana, Guinea-Bissau, Guinea, Mali, Nigeria, Togo.

Digitaria eylesii C. E. Hubbard. *Kew Bull.* 1926, 246 (1926).

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: Rhodesia: Salisbury, on river bank, 1530 m, *Eyles* 3277.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (242).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): in honor of Frederick Eyles (1864–1937) English-born botanist in Zimbabwe.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 40–60 cm long. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 5–10 cm long, 2–4 mm wide. Leaf-blade surface smooth or scaberulous, rough abaxially, glabrous or hispid, sparsely hairy, hairy adaxially. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2(–3), single or paired, erect, unilateral, (8–)10–20 cm long. Central inflorescence axis 0–6 cm long. Rhachis narrowly winged, angular, 0.2–0.3 mm wide, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 0.5–2.5 mm long, puberulous, 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, 2.5–3 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.5 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface glabrous or pilose, with capitate hairs. Upper glume hairs white. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, glabrous or pubescent, with capitate hairs, bearing white hairs, acute. Fertile lemma lanceolate or oblong, 2.5–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Angola, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, Gauteng, Mpumalanga, Swaziland.

Digitaria fauriei Ohwi. *Acta Phytotax. & Geobot., Kyoto*, 11: 31 (1942).

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: Taiwan: Taipei, near seashores, open places.

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (504).

Derivation (Clifford & Bostock 2007): in honor of Urbain Jean Faurie (1847–1914) French cleric and amateur botanist.

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

Habit, Vegetative Morphology. Annual, caespitose. Stolons present. Culms geniculately ascending or decumbent, 15–20 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.4 mm long, truncate. Leaf-blades 3–5 cm long, 2–4 mm wide. Leaf-blade surface pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, erect, unilateral, 3–5 cm long. Rhachis narrowly winged, with rounded midrib, 0.8–1 mm wide, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic or oblong, dorsally compressed, acute, 1.3–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.25–0.5 length of spikelet, membranous, without keels. Upper glume surface puberulous or pubescent, with verruculose hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic or oblong, 1 length of spikelet, membranous, 5–7 -veined, puberulous or pubescent, with verruculose hairs (with or without coiled tip), bearing yellow hairs, obtuse. Fertile lemma elliptic or ovate, 1.3–1.5 mm long, cartilaginous, much thinner on margins, purple or black, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.3–0.5 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China, Eastern Asia. Taiwan.

Digitaria fibrosa (Hack.) Stapf ex Craib. *Kew Bull.* 1912, 428 (1912).

Regarded by K as a synonym (*D. setifolia*).

Accepted by: 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).

TYPE from China. **Basionym or Replaced Name:** *Panicum fibrosum* Hack., *Oesterr. Bot. Z.* 51(9): 330 (1901)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Sampson* 9,

ST: *Welford* 257, China: Hongkong (K).

LT: *Sampson s.n.*, China: Guangdong: Guangzhou, White Cloud Hills (K). LT designated (as type specimen) by Henrard, *Monogr. Digitaria* 250 (1950).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (250), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 754).

Derivation (Clifford & Bostock 2007): *L. fibra*, fibre; *-osa*, abundance. Leaf-sheaths disintegrating at length into copious fibres.

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

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

Country /Province /State. China. China South Central, China Southeast. **Indo-China.** Laos, Myanmar, Thailand.

TDWG4. Fujian, Guangdong, Guangxi. Sichuan, Yunnan.

Digitaria fiebrigii (Hack.) A. Camus. *Bull. Mus. Hist. Nat. Paris*, 30: 106 (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).

TYPE from Paraguay. **Basionym or Replaced Name:** *Panicum fiebrigii* Hack., *Repert. Spec. Nov. Regni Veg.* 8: 46 (1910)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *K. Fiebrig 5371*, 7 Jul 1910, Paraguay: Chaco: Paraguaria septentrionalis, entre Rmo Apa y Aquidaban (G; ILT: B, BAA-662 (fragm. ex B), US-2942425 (fragm.), W). LT designated (as type) by Henrard, *Monogr. Digitaria* 251 (1950); also discussed by Hitchcock, *Proc. Biol. Soc. Wash.* 40: 84 (1927).

ST: *Fiebrig 5375*, 1909, Paraguay: Paraguaria septentrionalis (G, US (fragm.)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (102, Fig. 27), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (251).

Derivation (Clifford & Bostock 2007): in honor of Karl Fiebrig Gertz (1869–1951) German-born South American botanist.

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

Habit, Vegetative Morphology. Perennial. Culms erect, 70–80 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Leaf-sheaths 10–12 cm long, glabrous on surface. Ligule an eciliate membrane, 1.5–2 mm long, erose, obtuse. Leaf-blades 15–35 cm long, 2–3 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Peduncle hispid above. Racemes 2–4, paired or digitate, unilateral, 7–13 cm long. Central inflorescence axis 1–1.5 cm long. Rhachis angular, 0.5 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, angular, unequal, 0.5–4.5 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, 2.3–2.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1.9–2 mm long, 0.75 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, 2.3–2.5 mm long, 1 length of spikelet, membranous, 7 -veined, hirsute, hairy between veins but central interspaces glabrous, setose on margins, acute. Fertile lemma elliptic, 2.3–2.5 mm long, 0.8–0.9 mm wide, cartilaginous, much thinner on margins, light brown or dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.2 mm long. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, 1 mm long. Embryo 0.4–0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Southern South America. El Salvador. Paraguay.

Digitaria filiformis (L.) Koel. *Desc. Gram.* 26 (1802).

Accepted by: R.J.Soreng et al., *Catalogue of 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 USA. **Basionym or Replaced Name:** *Panicum filiforme* L., *Sp. Pl.* 1: 57 (1753)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Kalm s.n.*, North America (LINN). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12(3): 117 (1908).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (367 as var. *filiformis* & *dolichophylla* & *villosa* & *laeviglumis*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (187, Fig. 61 var. *villosa*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (105, Fig. 28), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (253 & 371 as *D. laeviglumis*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:43(1980)).

Illustrations (Journals): *Darwiniana* (19: 131, Fig. 18 (1974)).

Derivation (Clifford & Bostock 2007): racemes thin.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 50–80 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane, 1 mm long. Leaf-blades 10–25 cm long, 2–6 mm wide. Leaf-blade surface glabrous or puberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, single or paired or borne along a central axis, unilateral, 7–13 cm long. Central inflorescence axis 5–7 cm long. Rhachis angular. 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 elliptic, dorsally compressed, 1.5–1.9 mm long, 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 glabrous or puberulous, with capitate hairs. Upper glume margins 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, 7 -veined, glabrous or puberulous, with capitate hairs, pubescent on margins, acute. Fertile lemma oblong or ovate, 1.5–1.9 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface scaberulous. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. Tubuai Is (*). **North-central USA, Northeast USA, South-central USA, Southeastern USA, Mexico.** Illinois, Kansas, Missouri, Oklahoma. Connecticut, Massachusetts, New Hampshire, Rhode Island. 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), Southwest Mexico, Southeast Mexico. **Mesoamerica, Western South America, Brazil, Southern South America.** Costa Rica. Bolivia, Colombia. Brazil Southeast. Argentina Northwest, Paraguay.

TDWG4. Jujuy, Salta. Morelos. Coahuila, Chihuahua, Durango, Zacatecas. Veracruz. Jalisco, Oaxaca. Chiapas.

Digitaria flaccida Stapf. Dyer, *Fl. Cap.* 7: 382 (1898).

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:** *Digitaria nitens* Rendle, *Cat. Welw. Afr. Pl.* 2:165. (1899). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Buchanan* 9, South Africa: Amatola Mts. (K).

ST: *Buchanan* 88, South Africa: Umsinga (K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1898):151, t. 43 as *D. nitens*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (257, 215 & 712 as *D. elegans*, *D. stolzii*).

Derivation (Clifford & Bostock 2007): L. unable to support its own weight. Inflorescence branches long and thin and so droop.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 30–100 cm long. Ligule an eciliate membrane. Leaf-blades 5–30 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 5–30, borne along a central axis, simply spaced or closely spaced, flexuous, unilateral, 5–10 cm long. Central inflorescence axis 10–30 cm long. Rhachis wingless, angular. Raceme-bases filiform, 20–50 mm long. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, pubescent, 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, 2.5–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, gibbous, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent or pilose, hairy generally or between veins. 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, 5 -veined, pilose, hairy below, hairy between veins (1st and 2nd laterals), with dorsal tufts of hair, 2 hair tufts in all, ciliate on margins (above), bearing purple hairs, acute. Fertile lemma elliptic, 2.5–4 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa.** DRC. Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape.

Digitaria floridana Hitchcock. *Proc. Biol. Soc. Wash.* 41: 163 (1928).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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.S. Hitchcock 2517, Jul 1898, USA: Florida: Hernando Co.: sandy pine woods (US-741824 (photo, L); IT: L (fragm. ex US)).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10, M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (373), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (261).

Derivation (Clifford & Bostock 2007): L.-ana, indicating location. From Florida State, USA.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 20–30 cm long. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane. Leaf-blades 4–7 cm long, 3–6 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 3–6 cm long. Central inflorescence axis 1–2 cm long. Rhachis broadly winged, glabrous on surface. 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 elliptic, dorsally compressed, 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 elliptic, 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 elliptic, 1 length of spikelet, membranous, 5 -veined, puberulous, acute. Fertile lemma oblong or ovate, 1.5–1.7 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Florida.

Digitaria fragilis (Steud.) Luces. *Journ. Wash. Acad. Sci.* 2: 160 (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. **Basionym or Replaced Name:** *Paspalum fragile* Steud., *Syn. Pl. Glumac.* 1: 17–18 (1855) [1853]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: N. Funck & L.J. Schlim 724, Aug 1843, Venezuela: Sucre: Cumana: savanas de Guanaguana (P; IT: G, K, US-2856493 (fragm.), US-2856494 (fragm.), US-1445136 (fragm.)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 121), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 141, Fig. 13 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (624 as *D. rhachitricha*).

Illustrations (Journals): *Darwiniana* (40: 181, fig.2. (2002)).

Derivation (Clifford & Bostock 2007): L. weak. Inflorescences readily disarticulating.

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

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 25–80 cm long, without nodal roots or rooting from lower nodes. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse, arising from mid culm. Leaf-sheaths hirsute, with tubercle-based hairs, outer margin hairy. Ligule a ciliolate membrane. Leaf-blades 10–12 cm long, 3 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface hirsute, densely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–10, borne along a central axis, unilateral, 10–12 cm long, simple or with branchlets at base of longer racemes, secondary branches racemulose. Central inflorescence axis 3 cm long, villous. Rhachis angular, scabrous on margins, villous on margins. Raceme-bases hirsute. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, angular, unequal, scaberulous, 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, 1.5–1.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.9 length of spikelet, narrower than lemma, membranous, without keels, 3 -veined. Upper glume surface pilose, hairy between veins. Upper glume hairs yellow. 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, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 1.4–1.5 mm long, cartilaginous, much thinner on margins, red, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Brazil. Guyana, Venezuela. Bolivia, Ecuador. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast.

Digitaria fujianensis (Liou) S.M.Phillips & S.L.Chen. *Novon* 13(4): 467 (2003).

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. **Basionym or Replaced Name:** *Leptoloma fujianensis* L. Liou, *Bot. Res. Academia Sinica* 1: 41, f. 1 (1983)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Fujian: Lian-cheng, inter rupes, 20 Sept. 1932, *Liang Yung* 3339 (HT: PE).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 753).

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–50 cm long, 4–5 -noded. Leaf-sheaths longer than adjacent culm internode, pilose. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 6–20 cm long, 3–6 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 12–18 cm long. Primary panicle branches ascending, whorled at lower nodes. Panicle branches capillary, straight. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, scaberulous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 3.5–4 mm long, 1 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.15 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex erose, obtuse. Upper glume elliptic, 3 mm long, 0.7–0.8 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface puberulous, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, acute. Fertile lemma elliptic, 3.5–4 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma surface smooth. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

TDWG4. Fujian.

Digitaria fulva Bosser. *Adansonia*, n. s., 8: 516 (1968).

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: Massif de l'Ankaratra, 220–2300 m, route Ambatolampy-Faratsiho, prairie altimontaine., *Bosser* 18862 (HT: P; IT: TAN).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (387, Fig 146).

Derivation (Clifford & Bostock 2007): L. brown, deep yellow. Usually a reference to spikelet color.

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

Habit, Vegetative Morphology. Perennial, mat forming, clumped densely. Rhizomes elongated. Butt sheaths pubescent. Culms erect, 20–60 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, truncate. Leaf-blades 5–20 cm long, 2–3 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous or pilose above. Racemes 2–4, paired or digitate, unilateral, 3–12 cm long. Rhachis angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, unequal, 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 oblong, dorsally compressed, acute, 2.7–3.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.66–0.75 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy between veins. Upper glume hairs tawny or red. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7–9 -veined, pubescent, hairy between veins, bearing tawny hairs or red hairs, acute. Fertile lemma oblong, 2.7–3.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria fumida S.T.Blake. *Proc. Roy. Soc. Queensland* 84 (5): 62 (1973)

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

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

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

North, Central, South East.

Digitaria fuscescens (Presl) Henrard. *Meded. Herb. Leid. No.* 61, 8 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of 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*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Philippines. **Basionym or Replaced Name:** *Paspalum fuscescens* J. Presl, *Reliq. Haenk.* 1(4–5): 213 (1830)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *T. Haenke s.n.*, no date, Philippines [Peru] (PR; IT: L, MO, US-2630404 (fragm.), W).

Illustrations (Books): H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (53, Fig. 44), S.A.Renvoize, *Gramineas de Bolivia* (1998) (533, Fig. 121), S.A.Renvoize, *The Grasses of Bahia*, 1984 (252, Fig. 94), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (86, Fig. 54), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (860, Fig. 176), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (107, Fig. 29), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 143, Fig. 14 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (604 as *D. pseudo-ischaeumum*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:44(1980)).

Derivation (Clifford & Bostock 2007): *L. fuscisco*, become dark. Lemma brown.

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

Habit, Vegetative Morphology. Annual, mat forming. Culms rambling, 4–30 cm long. Ligule an eciliate membrane. Leaf-blades 1–5 cm long, 1–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, unilateral, 1–7 cm long. Rhachis broadly winged, with rounded midrib. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic, dorsally compressed, 1.2–1.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume 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, 7 -veined, glabrous, acute. Fertile lemma elliptic, 1.2–1.6 mm long, cartilaginous, much thinner on margins, pallid or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Tropical Asia, Pacific, South America.

Country /Province /State. **West tropical Africa, West-central tropical Africa, East tropical Africa, Western Indian ocean.** Ghana, Ivory Coast, Liberia, Nigeria. Cameroon. Tanzania. Mauritius, Madagascar, Reunion. **Indian Subcontinent, Indo-China, Malesia.** Eastern Himalaya, Sri Lanka. Laos, Myanmar. Borneo, Java, Lesser Sunda Is, Malaya, Sumatra, Philippines, Singapore. **Southwestern Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), Samoa (*), Tonga (*), Wallis-Futuna Is (*). Cook Is (*), Society Is (*). Hawaii (*). **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** Belize. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Darjeeling. Manipur, Nagaland. West Bengal.

Digitaria fuscopilosa P. Goetghebeur. *Misc. Pap. Landbouwhoges. Wageningen*, 19: 146 (1980).

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

TYPE from Mozambique. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mozambique: Manica e Sofala, Manica, serra Zuirra, Tsetserra, 6 km from the 'vacaria', on the way to Vila Pery, 1800 m, in humid mountain grassland near dense Podocarpus forsts, 3 Apr 1966, A.R. Torre & M.F. Correia 15642 (HT: LISC).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes elongated. Culms erect, 40–60 cm long. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths pilose. Ligule a ciliolate membrane, 0.5–1 mm long, truncate. Leaf-blades flat or involute, 7–10 cm long, 2–4 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, borne along a central axis, unilateral, 4–8 cm long. Rhachis wingless, angular, 0.3 mm wide, scabrous on surface, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, angular, unequal, 0.5–5 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, 2.3–2.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume ovate, 0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume hairs dark brown. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pilose, bearing dark brown hairs, acute. Fertile lemma oblong, 2.3–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **South tropical Africa.** Mozambique.

Digitaria gardneri Henrard. *Blumea*, 1: 105 (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gardner 2340*, Apr 1839, Brazil: Piaum (L-934.121–149; IT: K, P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (275).

Derivation (Clifford & Bostock 2007): in honor of George Gardner (1812–49) Scots-born physician and botanist, sometime Director of Peradeniya Gardens, Sri Lanka.

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

Habit, Vegetative Morphology. Annual. Culms erect, 50–100 cm long, 5–6 -noded, with 0.5 of their length below uppermost node. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blades 10–20 cm long, 3–4 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, digitate, unilateral, 2–15 cm long. Central inflorescence axis 1–5 cm long. Rhachis narrowly winged, angular. Spikelets in threes. 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 elliptic, dorsally compressed, 2 mm long, with hairs extending 0.5 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume linear, 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, 5 -veined, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 1.8 mm long, cartilaginous, much thinner on margins, purple, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast. Goias, Maranhao, Piaui.

Digitaria gaudichaudii (Kunth) Henrard. *Meded. Herb. Leid. No.* 61, 18 (1930).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

Basionym or Replaced Name: *Digitaria stricta* Gaudich., *Voy. Uranie* 409 (1826), *Panicum gaudichaudii* Kunth, *Revis. Gramin.* 1: Suppl. 9 (1830). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gaudichaud s.n.*, Marianna Islands (P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (277 & 630 as *D. robinsonii*).

Derivation (Clifford & Bostock 2007): in honor of Charles Gaudichaud-Beaupri (1789–1854) French pharmacist and naturalist.

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

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 30–60 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 15–25 cm long, 4–8 mm wide, coriaceous.

Inflorescence. Inflorescence composed of racemes. Racemes 7–16, digitate, unilateral, 6–12 cm long. Rhachis narrowly winged, angular, 0.5–1 mm wide. Spikelet packing 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 lanceolate or elliptic, dorsally compressed, 2.5–3 mm long, falling entire.

Glumes. Glumes both absent or obscure or one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.1 length of spikelet, hyaline, without keels, (1–)3 -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 elliptic, 1 length of spikelet, membranous, 5–7 -veined, ribbed, with equidistant veins, scabrous, rough on veins, glabrous or puberulous, acute. Fertile lemma lanceolate, 2.5–3 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Northwestern Pacific. Marianas, Wake Is.

Digitaria gayana (Kunth) A.Chev. *Sudania* 1:163 (1911).

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

TYPE from Senegal. **Basionym or Replaced Name:** *Panicum gayanum* Kunth, *Revis. Gramin.* 1: 239, t. 31 (1829)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Roger 56*, Senegal: Kouma (P; IT: P).

ST: *Gay s.n.*, (B?).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):155, t. 44), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (279 & 216 as *D. elegantula*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Claude Gay (1800–1873) French botanist.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms 30–60 cm long. Ligule an eciliate membrane. Leaf-blades 3–15 cm long, 2–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–6, paired or digitate, unilateral, 3–18 cm long. Rhachis broadly winged, with sharp-edged midrib. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 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, 2–3 mm long, with hairs extending 2–4 mm beyond apex, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.3–0.4 mm long, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.8–1 length of spikelet, membranous, 3 -veined. 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, 5–7 -veined, with 2 longitudinal grooves, villous, eciliate on midvein, villous on margins, bearing white hairs or purple hairs, acute. Fertile lemma elliptic, gibbous, 2–3 mm long, cartilaginous, much thinner on margins, yellow or light brown, keeled. Lemma margins flat, covering most of palea. Lemma apex rostrate. Palea cartilaginous.

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, Gambia, Ghana, Mali, Mauritania, Nigeria, Senegal, Togo, Niger. DRC. Sudan. Kenya, Tanzania, Uganda. Angola, Zambia, Zimbabwe. Namibia, Botswana.

Digitaria gazensis Rendle. *Journ. Linn. Soc., Bot.* 40: 228 (1911).

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: Habitat Beira, open woods, 50 ft, Dec, *Swynnerton s.n.*

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (281, 502, & 593 as *D. antunesii*, *D. nyassana*, *D. proxima*).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. Of Gazaland, formerly a Territory extending from coastal Mozambique to the mountains in eastern Zimbabwe at about latitude 20°S. Now largely included in Mozambique.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty. Butt sheaths pubescent or villous or woolly. Culms erect, 30–200 cm long. Culm-nodes bearded. Ligule an eciliate membrane. Leaf-blades 3–30 cm long, 2–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 6–20, borne along a central axis, unilateral, 5–20 cm long, simple or secondarily branched. Central inflorescence axis 2–14 cm long. Rhachis wingless, angular. 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, dorsally compressed, 1.5–2.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. 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 elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with hooked hairs (curled tips), bearing white hairs or dark brown hairs or purple hairs, acute. Fertile lemma elliptic, 1.5–2.5 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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. DRC. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia. Madagascar.

Digitaria gentilis Henrard. *Monogr. Gen. Digitaria*, 284 (1950).

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

TYPE from Africa. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Africa tropical gallica, 24 Sep 1930, *J. Trochain 570* (HT: P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (284).

Derivation (Clifford & Bostock 2007): L. of the same clan. Belonging in the same Section of the genus.

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

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 30–100 cm long, 4–5 mm diam. Culm-internodes elliptical in section, distally glabrous. Culm-nodes black, glabrous or pubescent. Ligule an eciliate membrane, 2 mm long, obtuse. Leaf-blades linear or lanceolate, 5–10 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–9, digitate or borne along a central axis, unilateral, 6–10 cm long. Central inflorescence axis 3–4 cm long. Rhachis wingless, angular, glabrous on surface, scabrous on margins. Raceme-bases hirsute. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 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, 3.75–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, 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, 5 -veined, with equidistant veins, puberulous, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 3.5 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria gerdesii (Hack.) Parodi. *Physis*, 7: 57 (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 Brazil. **Basionym or Replaced Name:** *Panicum gerdesii* Hack., *Oesterr. Bot. Z.* 51: 333 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.F. Gerdes 50*, no date, Brazil: Sco Paulo: in campis prope Manoel de Botocatu (W; IT: US-80757 (fragm.)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (110, Fig. 30), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (286 & 288 as var. *boliviensis*).

Derivation (Clifford & Bostock 2007): in honor of Gerdes who collected in Brazil.

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

Habit, Vegetative Morphology. Perennial. Butt sheaths hirsute. Culms erect, 50–80 cm long. Leaf-sheaths longer than adjacent culm internode, hirsute. Ligule an eciliate membrane, 0.5 mm long, erose, truncate. Leaf-blades 8–20 cm long, 3–6 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 1–3, single or paired or digitate, flexuous, unilateral, 10–15 cm long. Rhachis angular, 0.7–0.9 mm wide, scabrous on margins. Spikelet packing crowded. Spikelets clustered at each node. Fertile spikelets pedicelled, 4–5 in the cluster. Pedicels present, angular, unequal, scabrous, glabrous, 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, dorsally compressed, 2.3–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 2.1–2.3 mm long, 0.9 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent, with capitate hairs or clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 2.2–2.5 mm long, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, with capitate hairs or clavate hairs, acute. Palea of lower sterile floret 0.5 mm long. Fertile lemma elliptic, 2.3–2.5 mm long, cartilaginous, much thinner on margins, dark brown, shiny, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.5 mm long. Anthers 3, 1.4 mm long, purple. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia. Brazil Southeast. Paraguay.

Digitaria gibbosa (R. Br.) Beauv. *Agrost.* 160 (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).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum gibbosum* R. Br., *Prodr.* 193 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *R. Brown 6124*, Australia (BM; IT: L, US-80670 (fragm.)).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (290).

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

Derivation (Clifford & Bostock 2007): *L. gibba*, swelling; -osa, indicating abundance. Spikelets swollen asymmetrically.

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

Habit, Vegetative Morphology. Annual. Culms erect, 25–40 cm long, 2–5 -noded. Culm-nodes glabrous. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface or pubescent, outer margin glabrous. Leaf-sheath auricles erect. Ligule a ciliolate membrane, 0.3–1 mm long. Leaf-blades linear or lanceolate, 2.5–15 cm long, 1–4 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 4–18 cm long, simple or secondarily branched. Rhachis wingless, angular, 0.35–0.45 mm wide, smooth on margins or scaberulous on margins. Spikelets in pairs or clustered at each node. Fertile spikelets pedicelled, 2–10(–25) in the cluster. Pedicels present, unequal, 0.5–1.5 mm long, ciliate, 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, 1.5–2.8 mm long, 0.6–1.2 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 1.2–2.2 mm long, 0.6–0.95 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or elliptic, 1 length of spikelet, membranous, 5–7 -veined, pubescent, hairy between veins or between veins but central interspaces glabrous, acute or acuminate. Fertile lemma lanceolate, 1.5–2.8 mm long, cartilaginous, much thinner on margins, keeled. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute or acuminate, mucronate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, Inland.

Digitaria glauca A. Camus. *Bull. Soc. Bot. France* 73: 914 (1927).

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: IT: *Perrier de la Bathie 15924*, Jan 1924, Madagascar: Plateau d'Antonimene (L).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (371, Fig 138), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (292 & 294 as var. *bechuanica*).

Derivation (Clifford & Bostock 2007): *L. glauca*, bluish-green. Whole plant or any of its parts glaucous.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 5–35 cm long. Culm-nodes pubescent. Ligule an eciliate membrane, truncate. Leaf-blades lanceolate, 0.5–2.2 cm long, 1–4 mm wide, glaucous. Leaf-blade surface hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 2–4 cm long. Rhachis angular. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. 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, 1.5–1.8 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblong, 0.05–0.1 mm long, 0.05 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 0.25–0.33 length of spikelet, membranous, 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 elliptic, 1 length of spikelet, membranous, 7 -veined, glabrous or pubescent, hairy between veins but central interspaces glabrous, ciliate on margins, acute. Fertile lemma lanceolate, 1.5–1.8 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Africa.

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

Digitaria gracillima (Scribn.) Fernald. *Rhodora*, 22: 101 (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 USA. **Basionym or Replaced Name:** *Panicum gracillimum* Scribn., *Bull. Torrey Bot. Club* 23: 146 (1896)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.V. Nash 1192*, 1–15 Jul 1894, USA: Florida: Lake Co. (US-741823).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (365), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (300).

Derivation (Clifford & Bostock 2007): L. very delicate. Of slender habit.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–80 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane. Leaf-blades flexuous, flat or involute, 30–40 cm long, 1–2 mm wide. Leaf-blade surface scabrous, rough adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 30 cm long. Central inflorescence axis 3–6 cm long. Rhachis angular. Spikelet packing lax, irregular. Spikelets in pairs or in threes or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. 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, dorsally compressed, acute, 2–2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex truncate or obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, 5 -veined, glabrous, acute. Fertile lemma elliptic, 2–2.3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Florida.

Digitaria griffithii (Hook. f.) Henrard. *Blumea*, 1: 100 (1934).

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. **Basionym or Replaced Name:** *Paspalum sanguinale* var. *griffithii* Hook. f., *Fl. Brit. India* 7(21): 15 (1897) [1896]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *G.H.K. Thwaites CP-3800*, Sri Lanka (L).

T: *R. Wight 3036*, India (L).

Illustrations (Books): K.M.Matthew, *Flora Palni Hills* (1996) (815, Pl 815), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (305).

Derivation (Clifford & Bostock 2007): In honour of William Griffith (1810–1845) English-born surgeon-botanist in India and southeast Asia.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Butt sheaths pubescent. Culms erect or geniculately ascending, 50–100 cm long. Leaf-sheaths glabrous on surface or hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 3 mm long, lacerate, truncate. Leaf-blades 10–25 cm long, 10–15 mm wide, flaccid. Leaf-blade surface scabrous, rough on both sides, glabrous or pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, digitate, unilateral, 6–13 cm long. Central inflorescence axis 5–6 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelet packing distant. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 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 lanceolate, dorsally compressed, acute, 2.5–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet. Upper glume ovate, 0.75 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent, hairy between veins. 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 unevenly spaced veins, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic or oblong, 2.5–3 mm long, cartilaginous, much thinner on margins, pallid, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute or apiculate. Palea cartilaginous.

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

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India, Sri Lanka.

TDWG4. Andhra Pradesh, Kerala, Karnataka, Tamilnadu.

Digitaria gymnostachys Pilger. *Notizbl. Bot. Gart. Berlin*, 15: 709 (1942).

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: *H.J. Schlieben 6267*, 15 Apr 1935, Tanzania: Lindi, 500 m (L; IT: MO, US-2207610).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41).

Derivation (Clifford & Bostock 2007): Gk. gymnos, naked; stachys, ear of corn. The spikelets lack a lower glume and the upper is much reduced.

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

Habit, Vegetative Morphology. Perennial. Culms erect, robust, 90–160 cm long. Ligule an eciliate membrane. Leaf-blades 10–60 cm long, 7–15 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 7–21, borne along a central axis, the lowest whorled, radiating, straight, unilateral, 10–25 cm long. Central inflorescence axis 5–17 cm long. Rhachis wingless, angular. Spikelet packing distant. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal.

Sterile Spikelets. Basal sterile spikelets absent or rudimentary.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–4.5 mm long, falling entire. Rhachilla internodes elongated below basal sterile floret. Rhachilla elongation 0.3–0.5 mm long.

Glumes. Glumes two, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 0.1 length of spikelet, 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 spikelet, membranous, 7 -veined, distinctly veined, glabrous, villous on margins, acute. Fertile lemma

elliptic, 3–4.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Tanzania. Mozambique. Limpopo, Kwazulu-Natal.

Digitaria gymnotheca Clayton. *Kew Bull.*, 29(3): 519 (1974).

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

TYPE from Kenya. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Kenya: Kilifi Dist.: Malindi, among bushes on sand dunes, 13 Aug 1949, *Bogdan 2589* (HT: K).

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

Derivation (Clifford & Bostock 2007): Gk *gymnos*, bare; *theke*, cup. Anthoecium exposed because subtending glumes are very small.

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

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 30–60 cm long, wiry. Ligule an eciliate membrane. Leaf-blades 5–20 cm long, 4–7 mm wide. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, digitate or borne along a central axis, simply spaced, unilateral, 8–15 cm long. Central inflorescence axis 0–2 cm long. Rhachis wingless, angular. Spikelet packing contiguous. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal.

Sterile Spikelets. Basal sterile spikelets absent or rudimentary.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2.7–3 mm long, falling entire. Rhachilla internodes elongated below basal sterile floret. Rhachilla elongation 0.1–0.5 mm long.

Glumes. Glumes two, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 0.2 length of spikelet, 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 spikelet, membranous, 7 -veined, ribbed, glabrous, villous on margins, acute. Fertile lemma elliptic, 2.7–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Ethiopia (inc. Eritrea). Kenya.

Digitaria hengduanensis L. Liou. *Bot. Res., Inst. Bot. (Beijing)*, 4: 37 (1989).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Yunnan: Yuan Mou, on riverside sands, 1200 m, 13 Sept. 1963, *Exped. Jinshajiang 63–6847* (HT: PE).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 761).

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

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect, 30–60 cm long, 3–4 -noded. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.5–2 mm long. Leaf-blades linear or lanceolate, 3–8 cm long, 2–6 mm wide. Leaf-blade surface scabrous, pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, unilateral, 3–10 cm long. Central inflorescence axis 2–5 cm long. Rhachis angular, scaberulous on margins. Spikelet packing lax. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, 4–8 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, 1.8–2 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 -veined. Upper glume surface pubescent, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, pubescent, hairy between veins, with capitate hairs, acute. Fertile lemma elliptic, 1.6 mm long, 0.8 mm wide, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

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

Country /Province /State. **China.** China South Central.

TDWG4. Sichuan, Yunnan.

Digitaria henrardii Veldkamp. *Blumea*, 21(1): 55 (1973).

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 Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.D. Merrill* 577, Aug 1910, Philippines: Luzon I.: Rizal Prov.: Masabong (L; IT: PRC, U, US-1099918).

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

Derivation (Clifford & Bostock 2007): in honor of Jan Theodor Henrard (1881–1974) Dutch botanist.

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

Habit, Vegetative Morphology. Annual, caespitose. Cataphylls inconspicuous. Butt sheaths pilose. Culms erect, 20–40 cm long. Lateral branches ample. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 0.75–1.75 mm long, erose, truncate. Leaf-blades 1.5–7.5 cm long, 1.5–4 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 1.5–7 cm long. Central inflorescence axis 0.5–2.75 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, curved, tip discoid or 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 oblong, dorsally compressed, 1.5–2 mm long, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.1–0.3 mm long, 0.05–0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, (3–)5 -veined. Upper glume lateral veins transversely connected at apex. 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–)7 -veined, with equidistant veins, with veins transversely connected at apex, pubescent, acute. Fertile lemma elliptic, 1.5–2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–0.6 mm long, purple.

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

Country /Province /State. **Malesia.** Philippines.

Digitaria henryi Rendle. *Journ. Linn. Soc.* 6: 323 (1904).

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), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Taiwan: Apes' Hill, Takow, A. *Henry* 1031 (HT: K; IT: BM, P).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (340, Fig 132), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (508), C-C Hsu, *Taiwan Grasses* (1975) (543, Pl. 1426), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 757).

Derivation (Clifford & Bostock 2007): In honor of Augustine Henry (1857–1936) Irish physician and forester.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms prostrate, slender, 20–50 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades lanceolate (narrowly), 3–8 cm long, 2–5 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, digitate, erect, unilateral, 4–8 cm long. Rhachis narrowly winged, flattened, 0.5 mm wide, glabrous on surface, scaberulous on margins. Spikelets appressed, 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 lanceolate, dorsally compressed, acuminate, 2.2–2.8 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2 mm long. Upper glume lanceolate, 0.5 length of spikelet, membranous, 3 -veined. Upper glume surface pilose, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1.1 length of fertile lemma, 1 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, pilose, hairy between veins, pubescent on margins, acute. Fertile lemma elliptic, cartilaginous, much thinner on margins, yellow to light green to grey, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

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

Country /Province /State. China, Eastern Asia. Hainan, China Southeast. Nansei-Shoto, Taiwan. **Indo-China.** Vietnam. Hawaii.

TDWG4. Fujian, Guangdong, Guangxi, Shanghai.

Digitaria hentyi J.F. Veldkamp. *Blumea*, 26(2): 391 (1980).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Papua New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.E. Henty NGF 20994*, 23 May 1974, Papua New Guinea: New Guinea: Eastern Highlands, Aiyura, -6.2 S Lat, 145.55 E Long, 5500 m (L; IT: A, BRI, CANB, K).

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

Derivation (Clifford & Bostock 2007): in honor of E.E. Henty (fl. 1974) Australian-born Papua New Guinea botanist.

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

Habit, Vegetative Morphology. Perennial, mat forming. Cataphylls evident. Culms decumbent, 30–60 cm long, rooting from lower nodes. Lateral branches ample, intravaginal. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs or reflexed hairs. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane, 1.5–2 mm long, erose. Leaf-blades linear or lanceolate, 6.8–8.2 cm long, 7–8.5 mm wide, flaccid. Leaf-blade surface smooth or scaberulous, rough abaxially, pubescent, densely hairy, hairy on both sides. Leaf-blade margins crenate.

Inflorescence. Inflorescence composed of racemes. Peduncle 2.6 cm long, glabrous. Racemes 7, borne along a central axis, ascending, unilateral, 5.5 cm long. Central inflorescence axis 4 cm long. Rhachis wingless, angular, scabrous on margins. Spikelet packing lax. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 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 oblong, dorsally compressed, 1.9–2.3 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.25 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume oblong, 1.5–1.75 mm long, 0.75–0.8 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume lateral veins transversely connected at apex. 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, 7 -veined, with equidistant veins, without cross-veins, glabrous, obtuse. Fertile lemma elliptic, 1.9–2.3 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

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

Distribution (TDWG). Continent. Tropical Asia.

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

Digitaria herpocladus Pilger. R. E. Fries, *Wiss. Ergebn. Schwed. Rhod. Kongo-Exped.* 1911–12, 1: 200 (1915).

Regarded by K as a synonym (*Digitaria gazensis*).

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

TYPE from Uganda. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Uganda, Butiaba: Fries 1980 (UPS holo).

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

Derivation (Clifford & Bostock 2007): Gk. herpo, creep; klados, branch. Culms decumbent.

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

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Uganda.

Digitaria heterantha (Hook.f.) Merrill. *Lingnaam Agric. Rev.* 1: No. 2, 48 (1923).

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

Basionym or Replaced Name: *Paspalum heteranthum* Hook. f., *Fl. Brit. India* 7(21): 16 (1897) [1896]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Meyen s.n.*, (B; IT: US).

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (502), J.Th.Henard, *Monograph of the genus Digitaria* (1950) (315 & 412 as *D. baliensis*, *D. longissima*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 755).

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

Derivation (Clifford & Bostock 2007): Gk. heteros, different; anthos, flower. Spikelets paired and dissimilar.

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

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 20–80 cm long, 2–5 -noded, rooting from lower nodes. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface or pilose, outer margin glabrous. Ligule an eciliate membrane, 0.7–1.2 mm long. Leaf-blades 2.5–9 cm long, 1–5 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, spreading, unilateral, 4–12 cm long, bearing 30–80 fertile spikelets on each. Rhachis wingless or narrowly winged, angular, 0.7–0.8 mm wide, smooth on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster, heteromorphic (pedicelled spikelets longer and hairier). Pedicels present, unequal, 0.3–0.5 mm long, smooth or scaberulous, glabrous, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3–6 mm long, 0.6–0.8 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–0.4 mm long, 0.05–0.1 length of spikelet, membranous. Lower glume apex truncate to acute. Upper glume lanceolate, 2.3–2.7 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or villous. Upper glume margins ciliate. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7–9 -veined, ribbed, with equidistant veins, scabrous, rough on veins, pubescent or pubescent or setose (on pedicelled spikelet), acuminate. Fertile lemma lanceolate, 3–5.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1–1.25 mm long.

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

Country /Province /State. China, Eastern Asia. Hainan, China Southeast. Taiwan. Indo-China, Malesia, Papuasia. Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Philippines. New Guinea. Australia. Queensland. Northwestern Pacific. Caroline Is.

TDWG4. Fujian, Guangdong.

Digitaria hitchcockii (Chase) Stuck. *Annuaire Conserv. Jard. Bot. Geneve* 17: 287 (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 USA. **Basionym or Replaced Name:** *Valota hitchcockii* Chase, *Proc. Biol. Soc. Wash.* 24: 110 (1911)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA: Texas: San Antonio, on dry prairie soil, 24 Jun 1910, *Hitchcock 5329* (HT: US).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (369), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (326).

Derivation (Clifford & Bostock 2007): in honor of Albert Spear Hitchcock (1865–1935), United States agrostologist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms 30–50 cm long. Ligule an eciliate membrane. Leaf-blades 2–5 cm long, 2–3 mm wide. Leaf-blade surface glabrous to hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, borne along a central axis, unilateral, 2–4 cm long. Central inflorescence axis 4–6 cm long. Rhachis angular. 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 elliptic, dorsally compressed, 2.5–3 mm long, with hairs extending 0 mm beyond apex, falling entire. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent, hairy generally. Upper glume hairs white. 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, pubescent, hairy all along, bearing white hairs, acute. Fertile lemma elliptic, 2.4 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. $2n = 34$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Mexico. Texas. Northeast Mexico, Northwest Mexico, Southwest Mexico.

TDWG4. Coahuila, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas. Oaxaca.

Digitaria hololeuca Henrard. *Monogr. Gen. Digitaria*, 327 (1950) (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 Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A. Chase 8660, 28 Feb-3 Mar 1925, Brazil: Minas Gerais: Barbacena, Serra Mantiqueira, 1230 m (L-934,121–109; IT: MO-5191404, US-1255079).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (327).

Derivation (Clifford & Bostock 2007): Gk. holos, entire; leukos, white. Densely pubescent with long white hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–50 cm long, 2 -noded. Culm-internodes distally pilose. Leaf-sheaths mostly shorter than adjacent culm internode, hirsute. Ligule a ciliate membrane. Leaf-blades 8–10 cm long, 2–4 mm wide. Leaf-blade surface hirsute, densely hairy, hairy on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3, digitate, unilateral, 3–6 cm long. Central inflorescence axis 0.5–1 cm long. Rhachis angular, scaberulous on margins. Raceme-bases pubescent. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, scabrous, 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, dorsally compressed, 1.75 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.05 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy between veins, with capitate hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3 -veined, pubescent, hairy between veins, with capitate hairs. Fertile lemma elliptic, 1.75 mm long, cartilaginous, much thinner on margins, purple, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Colombia. Brazil Southeast.

Digitaria horizontalis Willd. *Enum. Hort. Berol.* 92 (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), N.Tsvelev, *Grasses of the Soviet Union* (1983), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Anon.*, Hispaniola (B-W-1654; IT: MVFA, US-725312).

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 (23, Pl. 19), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (381, Fig. 143), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (379), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (169, Fig. 107), S.A.Renvoize, *The Grasses of Bahia*, 1984 (252, Fig. 94), J.A.Steyermark et al, *Flora of the Venezuelan Guayana Vol. 8* (2004) (87, Fig. 56), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (898, Fig. 182), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (182, Fig. 59), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (121, Fig. 34), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 144, Fig. 15 (2006)), E.Judziwicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (178, Fig. 29), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (332 & 333, 622 as *Panicum porranthum*, *D. reflexa*), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:45(1980)).

Illustrations (Journals): *Darwiniana* (19: 148, Fig. 23 (1974)), *Ruizia* (13:399 Fig 53k-1 (1993)).

Derivation (Clifford & Bostock 2007): L. horizontal. Primary panicle branches horizontal.

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

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–100 cm long. Ligule an eciliate membrane. Leaf-blades 2–20 cm long, 2–14 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–22, borne along a central axis, unilateral, 4–17 cm long. Central inflorescence axis 1–6 cm long. Rhachis narrowly winged, angular, glabrous on surface or with scattered hairs, scabrous on margins. Spikelet packing lax, 0.5 their length apart. Spikelets appressed, in pairs. Fertile spikelets pedicelled, 2 in the cluster, all alike. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, 1.7–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.15 mm long, 0.1 length of spikelet. Upper glume lanceolate, 0.3–0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins or with unevenly spaced veins, puberulous or pubescent, hairy between veins, eciliate on margins or ciliate on margins, acute. Fertile lemma elliptic, 1.7–3 mm long, cartilaginous, much thinner on margins, grey or dark brown, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea, ciliate. Palea cartilaginous.

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

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

Country /Province /State. **Macaronesia, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, Western Indian ocean.** Cape Verde. Benin, Burkina, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Nigeria, Senegal, Sierre Leone. Cameroon, Gabon, Bioko, DRC. Sudan. Aldabra (*), Mauritius (*), Madagascar (*), Seychelles. **Caucasus.** Transcaucasus. **Indo-China.** Vietnam. **Southwestern Pacific, South-central Pacific, North-central Pacific.** Samoa (*), Tonga (*). Marquesas (*), Society Is (*). Hawaii (*). **Southeastern USA, Mexico.** Alabama, Florida. 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, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Turks-Caicos Is, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Galapagos, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Argentina Northwest, Chile North, Paraguay.

TDWG4. Jujuy, Salta. Chaco, Corrientes, Formosa. Mexico State, Puebla. Coahuila, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Sinaloa. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas, Quintana Roo, Tabasco, Yucatan.

Digitaria hubbardii Henrard. *Monogr. Gen. Digitaria*, 334 (1950).

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: HT: *Whittet 2*, Australia (K; IT: NSW).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (217), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(15)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (334).

Derivation (Clifford & Bostock 2007): in honor of Charles Edward Hubbard (1900–1980) English agrostologist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths villous. Culms erect or geniculately ascending, 20–60 cm long, 3–10 -noded. Culm-nodes glabrous or pubescent. Lateral branches ample. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane, 1 mm long, truncate or obtuse. Leaf-blades involute, 5–10 cm long, 1–2 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, borne along a central axis, spreading, unilateral, 2.5–8 cm long. Central inflorescence axis 1.5–4 cm long. Rhachis angular, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 1 mm long or 3–5 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 lanceolate, dorsally compressed, acute, 3–3.25 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate or orbicular, 0.5 mm long, 0.15 length of spikelet, membranous. Lower glume apex obtuse. Upper glume lanceolate, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume hairs 1–1.5 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or ovate, 1 length of spikelet, membranous, 5–7 -veined, pilose, hairy between veins but central interspaces glabrous, with dorsal tufts of hair, 2 hair tufts in all, bearing hairs 1–1.5 mm long, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

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

Region. Northern Europe (*).

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

TDWG4. Inland. Western Slopes.

Digitaria humbertii A. Camus. *Bull. Soc. Bot. France*, 73: 915 (1927).

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>: *vide* TROPICOS and Kew Synonymy Database: Madagascar, Ambovoranto: Viguier & Humbert 1133bis.

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (377, Fig 141), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (336).

Derivation (Clifford & Bostock 2007): in honor of Jean Henri Humbert (1887–1967) French botanist who collected in Madagascar.

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

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms decumbent or rambling, slender, 10–30 cm long, rooting from lower nodes. Culm-internodes distally glabrous. Ligule an eciliate membrane, 0.5 mm long, truncate. Leaf-blades 2–5 cm long, 1.5–4 mm wide. Leaf-blade surface glabrous or pubescent or hirsute, densely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 2–6 cm long. Rhachis angular. Spikelets ascending, solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, unequal, 0.5–2 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 oblong or ovate, dorsally compressed, acute, 2–2.2 mm long, falling entire.

Glumes. Glumes dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.25–0.5 length of spikelet, membranous, much thinner on margins, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, 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, 7 -veined, glabrous, acute. Fertile lemma oblong, 2–2.2 mm long, cartilaginous, much thinner on margins, yellow or purple, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria hyalina Robyns & Van der Veken. *Bull.Jard. Bot. Brux.* 22: 150 (1952).

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: Zaire, Kasombo: Quarre 4151 (BR holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): Gk. *hyalos*, glass; -ina, belonging to. Margins of glumes, lemmas and sterile lemmas hyaline.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 40–100 cm long. Culm-internodes distally glabrous or pubescent. Culm-nodes brown, glabrous or pubescent. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliolate membrane, 1–1.5 mm long. Leaf-blades 5–20 cm long, 3–4 mm wide. Leaf-blade surface scabrous, rough adaxially, pubescent, hairy on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)3–4, digitate, erect, unilateral, (5–)10–25 cm long. Central inflorescence axis 0–4 cm long. Rhachis narrowly winged, angular, 0.3–0.5 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, unequal, 0.5–3 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 lanceolate or oblong, dorsally compressed, 3–4 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.5–0.66 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface pilose, with capitate hairs. Upper glume hairs white or red. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or oblong, 1 length of spikelet, membranous, 7 -veined, pilose, with capitate hairs, bearing white hairs or red hairs, acute. Fertile lemma lanceolate or oblong, 3–4 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

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

Digitaria hydrophila Van der Veken. *Bull.Jard. Bot. Brux.* 25: 326 (1955).

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: Zaire, Sampwe: Quarre 5773 (BR holo).

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

Derivation (Clifford & Bostock 2007): Gk. *hydor*, water; *phileo*, love. Growing in or close to water.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 25 cm long, 4–7 -noded. Culm-nodes glabrous. Lateral branches lacking. Ligule an eciliate membrane, 3–4 mm long. Leaf-blades linear or lanceolate, 5–15 cm long, 4–8 mm wide, flaccid. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–9, digitate, unilateral, 3–5 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, scaberrulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–4 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, 2.4–2.8 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate or orbicular, 0.6–0.7 mm long, 0.25 length of spikelet, hyaline, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume surface glabrous. Upper glume apex erose, obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7(–9) -veined, with equidistant veins, glabrous, acute. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, dark brown, shiny, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma surface granulate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis 0.8 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Digitaria hystrioides Vickery. *Contrib. N. S. Wales Nat. Herb.* 1: 324 (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>: *vide* TROPICOS and Kew Synonymy Database: Australia: New South Wales: Gerelah, Nyngan, 20 Feb 1936, *J.C. Butcher s.n.* (HT: NSW-8017).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (217), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (235, Fig. 37), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

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

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths villous. Culms erect or geniculately ascending, 15–60 cm long, 4–5 -noded. Culm-nodes pubescent or bearded. Lateral branches lacking or sparse, arising from upper culm. Leaf-sheaths pubescent or hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long, obtuse. Leaf-blades 8–15 cm long, 3–6 mm wide. Leaf-blade surface pubescent or hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–15, borne along a central axis, the lowest whorled, spreading, unilateral, 15–30 cm long. Central inflorescence axis 6–13 cm long. Rhachis angular, scabrous on margins. Spikelet packing distant. Raceme-bases filiform, 30–120 mm long, pubescent or hirsute, hairy at base. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.5–1 mm long or 2–4 mm long, scabrous, 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, dorsally compressed, 3–3.5 mm long, with hairs extending 0.5–1 mm beyond apex, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.15 length of spikelet, membranous, 0–1 -veined. Lower glume lateral veins obscure. Lower glume apex obtuse or acute. Upper glume elliptic, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume hairs 1–1.5 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, 5 -veined, villous or setose, hairy between veins but central interspaces glabrous, bearing hairs 1–1.5 mm long, rostrate. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, shiny, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland, New South Wales.

TDWG4. Central Australia. North, Central, South East, Inland. Coast, Western Slopes.

Digitaria iburua Stapf. *Kew Bull.* 1915, 382 (1915).

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: *Lamb 54*, Nigeria (K).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (339).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3069 (1916)).

Derivation (Clifford & Bostock 2007): Hausa, iburu, local name. A cereal grown in Upper Guinea and Northern Nigeria.

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

Habit, Vegetative Morphology. Annual. Culms erect, 45–140 cm long, 4–5 -noded. Ligule an eciliate membrane, 2–3 mm long. Leaf-blades 15–30 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, digitate, unilateral, 10–15 cm long. Rhachis narrowly winged, angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, unequal, pubescent, 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 oblong, dorsally compressed, acute, 2 mm long, persistent on plant.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 0.75–1.3 mm long, 0.33–0.5 length of spikelet, hyaline, 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 elliptic or oblong, 1 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, glabrous, acute. Fertile lemma elliptic or oblong, 2 mm long, cartilaginous, much thinner on margins, light brown or dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa. Benin, Nigeria, Togo.

Digitaria imbricata R.D. Webster. *Brunonia*, 6(2): 184 (1984).

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, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Queensland: North Kennedy District: 2 Feb 1931, *Hubbard & Winders 7103* (HT: BRI; IT: CANB).

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. imbricare*, overlap like roof-tiles. The shorter branches bear densely overlapping spikelets.

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

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 30–50 cm long, 3–5 -noded. Culm-nodes bearded. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface or puberulous, outer margin glabrous. Ligule an eciliate membrane, 0.3–1.1 mm long, erose, obtuse. Leaf-blades flat or conduplicate, 2–7.5 cm long, 2.4–3.1 mm wide. Leaf-blade surface scabrous, glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, borne along a central axis, spreading, unilateral, 3–6.5 cm long, bearing 20–34 fertile spikelets on each. Central inflorescence axis 1.5–4 cm long. Rhachis narrowly winged, angular, 0.3–0.6 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.4–0.8 mm long, scabrous, glabrous, 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, dorsally compressed, 2.4–2.8 mm long, 0.6–0.8 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.4 mm long, 0.05–0.1 length of spikelet, membranous. Lower glume apex truncate or obtuse. Upper glume lanceolate, 2.3–2.6 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, prominently veined, pubescent, hairy between veins but central interspaces glabrous, acuminate. Fertile lemma lanceolate, 2.3–2.6 mm long, cartilaginous, much thinner on

margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acuminate, mucicous or mucronate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central, Inland.

Digitaria incisa Van der Veken. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 406 (1975).

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

TYPE from DRC. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Zaire, Missa: Desenfans 5218 (BR holotype).

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

Derivation (Clifford & Bostock 2007): L. cut deeply. Lower glume deeply bifid.

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

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect or geniculately ascending, 70–100 cm long. Culm-internodes terete, distally glabrous. Culm-nodes glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, smooth, glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long, truncate. Leaf-blades 7–15 cm long, 3–5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface smooth, glabrous. Leaf-blade margins cartilaginous, scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 10–15 cm long. Rhachis angular, glabrous on surface, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.2–2.5 mm long, scabrous, 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 or oblong, dorsally compressed, 2.7–3.1 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, clasping, 0.5–1 mm long, 0.2–0.33 length of spikelet, hyaline, pallid, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex dentate, 2 -fid. Upper glume lanceolate or oblong, 2.7–3.1 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy between veins, with verruculose hairs. Upper glume margins pubescent. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, with hooked hairs, with basal tufts of hair, 2 hair tufts in all, pubescent on margins, bearing hairs 0.7–0.8 mm long, acute. Fertile lemma lanceolate to oblong, 2.5–3 mm long, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Digitaria induta Swallen. *Contr. U.S. Natl. Herb.* 29(6): 266–267 (1948) [1949].

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *J.R. Swallen 3660*, 1–5 Mar 1934, Brazil: Maranhão: bank of small creek in Chapada, between Barra do Corda and Grajaú (US-1612872; IT: L (fragm.)).

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

Derivation (Clifford & Bostock 2007): L. induo, clothe. Glumes and/or lemmas densely hairy.

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

Habit, Vegetative Morphology. Annual. Culms erect, 24–30 cm long. Lateral branches sparse, arising from lower culm. Leaf-sheaths longer than adjacent culm internode, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.8 mm long. Leaf-blades 5–13.5 cm long, 3–6 mm wide. Leaf-blade surface hirsute, densely hairy, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3, digitate, ascending, unilateral, 5.5–8 cm long. Rhachis angular, 0.3 mm wide, pilose on surface, scabrous on margins. Spikelets in threes. 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 elliptic, dorsally compressed, 1.6–2 mm long, with hairs extending 0.5 mm beyond apex, 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 hispid, hairy between veins. Upper glume hairs red.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, 3 -veined, pubescent, hairy between veins but central interspaces glabrous. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. **Brazil.** Brazil Northeast.

Digitaria insularis (L.) Mez ex Ekman. *Arkiv Bot. Stockh.* 11 No. 4, 17 (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), J.F.Veldkamp, *Poaceae ms (Flora Malesiana)*, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Jamaica. **Basionym or Replaced Name:** *Andropogon insularis* L., *Syst. Nat. (ed. 10)* 1304 (1759)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *P. Browne s.n.*, Jamaica (LINN-1211.20). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 126 (1908); also by Veldkamp, *Taxon* 33: 96 (1984).

ST: *H. Sloane s.n.*, Jamaica (L).

Illustrations (Books): E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (68, Pl. 23), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1527, Pl. 225), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (371), F.W.Gould, *The Grasses of Texas* (1975) (412, Fig. 220), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (166, Fig. 105 as *Trichachne*), S.A.Renvoize, *Gramineas de Bolivia* (1998) (531, Fig. 120), S.A.Renvoize, *The Grasses of Bahia*, 1984 (254, Fig. 95), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (88, Fig. 57), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (355, Fig. 148), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (191, Fig. 63), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (476, Fig. 123), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (114, Fig. 31), B.Rosengurt, *Gramineas Uruguayas I* (1970) (308, Fig. 130), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 144, Fig. 15 (2006)), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (178, Fig. 29), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (347).

Illustrations (Journals): *Darwiniana* (19: 88, Fig.5 (1974)).

Derivation (Clifford & Bostock 2007): L. insula, island; -are, pertaining to. Island species.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms erect or geniculately ascending, 70–120 cm long, 5–10 mm diam. Culm-nodes brown, bearded. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades 12–40 cm long, 7–15 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 20–50, borne along a central axis, unilateral, 10–15 cm long. Central inflorescence axis 8–30 cm long. Rhachis wingless, angular. 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 lanceolate, dorsally compressed, acuminate, 3.5–4 mm long, falling entire. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, 0.5–1 mm long, 0.15–0.25 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, villous, acuminate. Fertile lemma lanceolate, 3–3.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. **Eastern Asia.** Kazan-retto. **Malesia, Papuasias.** Philippines. New Guinea PNG. New Guinea, Solomon Is (*). **Australia** (*). Queensland (*). **Southwestern Pacific, Northwestern Pacific, North-central Pacific.** Marquesas (*). Caroline Is (*), Marianas (*), Marshall Is (*), Wake Is (*). Hawaii (*).

Southwestern USA, South-central USA, Southeastern USA, Mexico. Arizona. Texas. Florida. 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, Venezuelan and Netherlands Antilles. Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil North, Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

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, Catarina, Rio Grande do Sul. Catamarca, Jujuy, La Rioja, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, Misiones, Santa Fe. Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, Tamaulipas. Veracruz. Sonora. Colima, Guerrero, Jalisco, Nayarit, Oaxaca. Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan.

Digitaria intecta Stapf. Prain, *Fl. Trop. Af.* 9: 478 (1919).

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

TYPE from Sudan. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: C. Schweinfurth 1156, 1865, Ethiopia: Gallabat, a weed in gardens at Matamma (K; IST: US-1061604 (ex B)).

ST: *Schimper* 996, 9 Dec 1862 [?], Ethiopia: Hamedo [?], 1500–2200m (K, US-1612289 (ex B)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (351).

Derivation (Clifford & Bostock 2007): L. in, without; tectum, cover. Spikelets lacking glumes.

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

Habit, Vegetative Morphology. Annual. Culms erect, 15–80 cm long. Ligule an eciliate membrane. Leaf-blades 6–25 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–20, borne along a central axis, erect or ascending, unilateral, 4–15 cm long. Central inflorescence axis 2–10 cm long. Rhachis angular. Spikelets in pairs or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present, setose, 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, 1.2–1.3 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret orbicular, 0.15–0.33 length of spikelet, hyaline, 1 -veined, without lateral veins, glabrous, obtuse. Fertile lemma elliptic, 1.2–1.3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa. Eritrea, Ethiopia (inc. Eritrea), Sudan. Uganda. Zambia.

Digitaria ischaemum (Schreb.) Muhl. *Desc. Gram.* 131 (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), 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), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Europe. **Basionym or Replaced Name:** *Panicum ischaemum* Schreb., *Spec. Fl. Erlang.* 16 (1804). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: Europe.

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (370), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (510), C-C Hsu, *Taiwan Grasses* (1975), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (442, Fig 373), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (218), 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) (373), F.W.Gould, *The Grasses of Texas* (1975) (412, Fig. 219), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (as *D. humifusa*),

H.J.Noltie, *The Grasses of Bhutan* (2000), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 762), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:46(1980)).

Illustrations (Journals): *Darwiniana* (19: 129, Fig. 17 (1974)).

Derivation (Clifford & Bostock 2007): as for *Ischaemum*. Spikelets hairy.

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

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending or decumbent, 10–35 cm long, 2–4 -noded. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 2–12 cm long, 2–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–8, digitate, unilateral, 1.5–7 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets appressed, in threes. Fertile spikelets pedicelled, 3 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, 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 elliptic, 1 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, pubescent, hairy between veins, with clavate hairs, obtuse. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–0.7 mm long. Hilum punctiform.

$N = 18$ (1 ref TROPICOS). $2n = 18$ (1 ref TROPICOS), or 36 (1 ref TROPICOS).

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

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

Country /Province /State. : Denmark, Great Britain (*), Sweden. : Austria, Belgium, Czechoslovakia, Germany, Hungary, Netherlands, Poland, Switzerland. : Corsica, France, Portugal, Spain. : Bulgaria, Italy, Romania, Sicily, Turkey Europe, Yugoslavia. Belarus, Estonia, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, North European Russia, Northwest European Russia, Ukraine. Russian far east, **Middle Asia, Caucasus, Western Asia, China, Eastern Asia, Russia.** Altay, Buryatiya, Chita, Irkutsk, Tuva. Amur, Kamchatka, Khabarovsk, Kuril Is, Primorye. Kazakhstan, Turkmenistan, Uzbekistan. China South Central, Inner Mongolia, Manchuria, China North-Central, China Southeast, Tibet, Xinjiang. Japan, Taiwan. Japan Hokkaido. **Indian Subcontinent.** Eastern Himalaya, Pakistan, West Himalaya. **Australia, New Zealand.** South Australia (*), New South Wales (*), A.C.T. (*), Victoria (*). New Zealand North I, New Zealand South I. **Western Canada, Eastern Canada, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA.** Alberta, British Columbia, Manitoba, Saskatchewan. Quebec. 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. New Mexico, Texas. Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. **Caribbean, Brazil, Southern South America.** Leeward Is. Brazil Southeast, Brazil South. Chile Central, Chile South.

TDWG4. Gansu, Hebei, Shaanxi, Shandong, Shanxi. Anhui, Fujian, Henan, Jiangsu. Sichuan. Bhutan. Uttah Pradesh. Himachal Pradesh, Jammu Kashmir. Southern. Coast, Tablelands, Western Slopes. Biobio. Los Lagos.

Digitaria jansenii Veldkamp. *Blumea*, 21(1): 29 (1973).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *S. Bloembergen* 3752, 15 Apr 1939, Indonesia: Moluccas: Maluku: Wetar, Pulau, 5 m (L).

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

Derivation (Clifford & Bostock 2007): L. -ella, diminutive here used as a name-forming suffix. in honor of Pieter Jansen (1882–1955) Dutch agrostologist.

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

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms geniculately ascending, 30–60 cm long, rooting from lower nodes. Leaf-sheaths pubescent. Ligule an eciliate membrane, 1.5–2 mm long, erose, truncate. Leaf-blades linear or lanceolate, 2–10 cm long, 2–6 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, unilateral, 6–9 cm long. Rhachis narrowly winged, angular, scabrous on margins. 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, dorsally compressed, 5.25–6 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.15–0.2 mm long, 0.03 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 0.1–0.25 mm long, 0–0.05 length of spikelet, membranous, without keels, 0–1 -veined. Upper glume primary vein absent or obscure. Upper glume lateral veins absent. Upper glume surface villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9–1 length of spikelet, membranous, 11–13 -veined, scabrous, glabrous, pubescent on margins or setose on margins, truncate to acute. Fertile lemma elliptic, 5.25–6 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 3–3.25 mm long, purple.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Lesser Sunda Is.

Digitaria jubata (Griseb.) Henrard. *Blumea*, 1: 100 (1934).

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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from India. **Basionym or Replaced Name:** *Paspalum jubatum* Griseb., *Nachr. Konigl. Ges. Wiss. Georg-Augusts-Univ.* 3: 84 (1868)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Assam/Meghalaya: Khasya, 7000 ft, *J.D. Hooker & T. Thomson PASPALUM* no. 9 (HT: GOET; IT: US-1126041) Khasya 7000 '.

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (360), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 764).

Derivation (Clifford & Bostock 2007): *L. jubum*, mane; -ata, possessing. The inflorescence or awn resembles a fox tail.

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

Habit, Vegetative Morphology. Annual. Culms erect, robust, 70–150 cm long, with prop roots. Leaf-sheaths ribbed, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long, obtuse. Leaf-blades 10–20 cm long, 3–5 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, digitate, in several whorls, unilateral, 10–17 cm long. Central inflorescence axis 5–10 cm long, pubescent. Rhachis angular, glabrous on surface, scabrous on margins. Spikelets in pairs or in threes or clustered at each node. Fertile spikelets pedicelled, 2–7 in the cluster. Pedicels present, filiform, flexuous, 1–8 mm long, scabrous, glabrous.

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

Glumes. Glumes one the lower absent or obscure. Upper glume lanceolate, 1.5 mm long, 1 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent, hairy between veins, with capitate hairs. 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, pubescent, hairy between veins, with capitate hairs, acute. Fertile lemma elliptic, 1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp.

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

Country /Province /State. China. China South Central. **Indian Subcontinent, Indo-China.** Assam, India, Myanmar.

TDWG4. Guizhou, Yunnan. Meghalaya.

Digitaria junghuhniana (Nees ex Steud.) Henrard. *Meded. Rijks-Herb.* 61: 11 (1930).

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. **Basionym or Replaced Name:** *Panicum junghuhnianum* Nees ex Steud., *Syn. Pl. Glumac.* 1: 63 (1855) [1853]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Junghuhn s.n.*, Jun, Indonesia: Java: Tjibogo (L-904.26–34; IT: B).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (361).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Franz Wilhelm Junghuhn (1809–1864) German botanist.

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

Habit, Vegetative Morphology. Annual, caespitose. Cataphylls inconspicuous. Culms decumbent, 25–50 cm long, rooting from lower nodes. Leaf-sheaths pilose. Ligule an eciliate membrane, 1.5–4 mm long, erose, truncate. Leaf-blades linear or lanceolate, 1.5–19 cm long, 3–10 mm wide. Leaf-blade surface pilose, sparsely hairy or moderately hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 4–19, borne along a central axis, unilateral, 1.5–13 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 1–9 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, tip discoid or 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, dorsally compressed, 2.25–3.25 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.2 mm long, 0–0.1 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic, 0.5–1.75 mm long, 0.4–0.6 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface glabrous. Upper glume margins 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, 7 -veined, with unevenly spaced veins, pubescent, acute. Fertile lemma elliptic, 2–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.6–0.65 mm long, purple.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasias. Borneo, Java, Lesser Sunda Is, Sumatra, Sulawesi, Philippines. New Guinea (?).

Digitaria killeenii Vega & Rugoolo. *Syst. Bot.* 27:252 (2002).

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

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Killeen* 1922, 4 Apr 1986, Bolivia: Santa Cruz: Quflo de Chavez: Est. San Josevito, 8 km NW of Concepcion, 16:02'S, 62:05'W, 490 m (SI; IT: LPB, MO).

Illustrations (Journals): *Systematic Botany* (27: 253, Fig.1 (2002)).

Derivation (Clifford & Bostock 2007): In honor of Timothy John Killeen (1952-) collector of the species.

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

Habit, Vegetative Morphology. Annual. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, robust, 180–200 cm long, 3.5–4 mm diam. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Lateral branches ample, arising from mid culm. Leaves cauline. Leaf-sheaths 22–29 cm long, longer than adjacent culm internode. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades 58–75 cm long, 8–13 mm wide, 6–55 cm long at summit of culm. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 4–9, digitate, unilateral, 4–9 cm long. Rhachis narrowly winged, angular, 1–1.5 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, unequal, 0.5–5 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 elliptic or obovate, dorsally compressed, 3–3.2 mm long, 1.3–1.4 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure or two, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.1–0.2 mm long, hyaline. Lower glume apex truncate. Upper glume elliptic, 2.5–3.8 mm long, membranous, without keels, (3–)5 -veined. Upper glume lateral veins prominent. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume margins ciliolate.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 2.8–3 mm long, 1 length of spikelet, membranous, 7 -veined, prominently veined, pilose, hairy between veins, with clavate hairs, ciliolate on margins. Palea of lower sterile floret 0.5 mm long. Fertile lemma elliptic, 2.8–3 mm long, cartilaginous, much thinner on margins, purple or black, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Lodicules 2, 0.7 mm long. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, ellipsoid, 2–2.2 mm long. Embryo 0.33 length of caryopsis. Hilum elliptic.

Distribution (TDWG). Continent. South America.

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

Digitaria lanceolata R.D. Webster. *Brunonia*, 6(2): 187 (1984).

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: Leichardt District: 20 Feb 1979, *Anderson 749* (HT: BRI).

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

Derivation (Clifford & Bostock 2007): *L. lanceus*, lance; -ola, diminutive; -ata, possessing.

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

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Culms 30–40 cm long, 3–6 -noded. Culm-nodes glabrous. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 1.8–2.4 mm long. Leaf-blades 10–20 cm long, 2.2–2.8 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes digitate, unilateral, 12–20 cm long. Central inflorescence axis 4–8 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 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, dorsally compressed, 2.5–2.8 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–0.35 mm long, 0.1 length of spikelet. Lower glume apex obtuse. Upper glume elliptic, 2.2–2.4 mm long, 0.9 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, 7 -veined, pubescent, acute. Fertile lemma lanceolate, 2.2–2.4 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. Central.

Digitaria lanuginosa (Nees) Henrard. *Meded. Herb. Leid.* No. 61, 5. (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 lanuginosum* Nees, *Agrost. Bras.* 63. (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil: Sellow (B holo).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (536, Fig 122), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (889, Fig. 181), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (304, Fig. 128), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (379).

Illustrations (Journals): *Darwiniana* (40: 185, fig.3 (2002)).

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

Habit, Vegetative Morphology. Annual. Stolons present. Basal innovations intravaginal. Culms decumbent, 30–45 cm long, rooting from lower nodes. Culm-nodes swollen, pubescent. Leaf-sheaths woolly. Ligule an eciliate membrane. Leaf-blades 10–15 cm long, 2.5 mm wide. Leaf-blade surface pubescent, hairy on both sides.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Axillary inflorescences present in upper axils, different from terminal (cleistogamous). Racemes 5–10, digitate, unilateral, 5–10 cm long. Rhachis angular. 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 lanceolate or elliptic, dorsally compressed, 2.8–3.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume lanceolate, 2.8–3.7 mm long, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, glabrous, acute. Fertile lemma elliptic, 2.8–3.7 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

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

Digitaria larsenii Bor. *Dansk Bot. Arkiv*, 20: 157 (1962).

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

TYPE from Thailand. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Sirensen, K. Larsen & B. Hansen 4607*, 19 Aug 1958, Thailand: Northern: Chiang Mai: Doi Sutep (L).

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

Derivation (Clifford & Bostock 2007): in honor of Kai Larsen (1926-) Danish botanist.

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

Habit, Vegetative Morphology. Annual. Culms 20–30 cm long. Culm-nodes glabrous. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1.5 mm long, truncate. Leaf-blades 5–10 cm long, 2.5 mm wide. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–4, borne along a central axis, unilateral, 2–4 cm long. Central inflorescence axis 2 cm long. Rhachis wingless, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 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 elliptic, dorsally compressed, acute, 1.75 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.5 mm long, 0.85 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with clavate hairs, acute. Fertile lemma elliptic, 1.75 mm long, cartilaginous, much thinner on margins, dark brown, shiny, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.75 mm long.

Distribution (TDWG). Continent. Tropical Asia.

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

Digitaria laxa (Reichb.) Parodi. *Physis*, 9: 18 (1928).

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

Basionym or Replaced Name: *Reimaria laxa* Rchb., *Surinam Exsic.* (1828)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Weigelt s.n.*, 1827, Surinam (B; IT: BM, L, MO, US (fragm.)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (116, Fig. 32), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (381).

Illustrations (Journals): *Darwiniana* (19: 83, Fig.4 (1974)).

Derivation (Clifford & Bostock 2007): L. loose. Inflorescence much branched either as a single panicle or from branching of the culms.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms geniculately ascending or leaning, 100–200 cm long, 3–5 mm diam. Culm-internodes smooth, distally glabrous. Leaf-sheaths inflated (slightly), glabrous on surface or hispid, with tubercle-based hairs. Ligule an eciliate membrane, 1.5–3 mm long. Leaf-blades lanceolate, 12–25 cm long, 10–15 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Peduncle 6–30 cm long, glabrous. Racemes numerous, borne along a central axis, in several whorls, unilateral, 10–18 cm long. Central inflorescence axis 15–30 cm long. Rhachis angular, scabrous on margins. Spikelets appressed, 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 lanceolate, dorsally compressed, 4.2–5.3 mm long, with hairs extending 0 mm beyond apex, falling entire. Rhachilla internodes elongated below proximal fertile floret. Rhachilla elongation 0.4 mm long.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 0.5–0.6 mm long, 0.1 length of spikelet, 0 -veined. Lower glume lateral veins absent. Upper glume linear, 2–2.5 mm long, 0.5 length of spikelet, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5–7 -veined, pubescent, scabrous on margins, ciliate on margins, bearing tawny hairs, acute. Fertile lemma lanceolate, 3.2–3.7 mm long, cartilaginous, much thinner on margins, light brown or dark brown, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America, Brazil, Southern South America. Windward Islands, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia. Brazil West Central, Brazil North, Brazil Southeast. Paraguay.

TDWG4. Amazonas, Acre, Rondonia. Chaco, Misiones, Santa Fe.

Digitaria lehmanniana Henrard. *Blumea*, 1: 107 (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 Colombia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Lehmann BT 632*, 1886, Colombia: forests of highlands of Popayan, 1500–2000 m (L-908.349–559; IT: BAA, K).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (533, Fig 121 as var. *dasyantha*, *D. nervalis*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 143, Fig. 14 (2006) as var. *lehmanniana*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (386).

Illustrations (Journals): *Darwiniana* (19: 135, Fig. 20 (1974)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Friedrich Karl Lehmann (1850–1903) who collected in South America.

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

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 15–40 cm long. Ligule an eciliate membrane. Leaf-blades 6–13 cm long, 3.5–5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–9, digitate, unilateral, 3–8 cm long. Rhachis angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 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, 1.3–1.5 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 glabrous. 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, glabrous, acute. Fertile lemma ovate, 1.3–1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

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

Distribution (TDWG). Continent. South America.

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

TDWG4. Tucuman.

Digitaria leiantha (Hack.) Parodi. *Physis*, 9: 21 (1928).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Panicum adustum* var. *leianthum* Hack., *Repert. Spec. Nov. Regni Veg.* 6(21–26): 342 (1909)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Rojas 111*, May 1906, Paraguay: Presidente Hayes: Gran Chaco, in campis altis, in regione cursus inferioris fluminis Pilcomayo [24:50"S, 58:30"W] (G; IT: BAA, BM, US-80448 (photo ex G), US-927969 (ex W), W-23181 (fragm.)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (119, Fig. 33), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (387).

Derivation (Clifford & Bostock 2007): Gk. leios, smooth; anthos, flower. Spikelets with glabrous glumes or lemmas.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 100–200 cm long. Culm-nodes brown. Leaf-sheaths glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane, 1–1.5 mm long, truncate. Leaf-blades flat or convolute, 20–24 cm long, 3–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 5–14, digitate, unilateral, 13–20 cm long. Central inflorescence axis 3–7 cm long. Rhachis angular, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, terete, 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, 2.4–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 1.2–2 mm long, 0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with clavate hairs, acute. Palea of lower sterile floret 0.8 mm long, 0.25 length of lemma. Fertile lemma elliptic, 2.4–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, 1.5–1.6 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. Paraguay.

TDWG4. Chaco, Corrientes, Misiones.

Digitaria leptalea Ohwi. *Acta Phytotax. & Geobot., Kyoto*, 11: 31 (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).

TYPE from Japan. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Japan: Ryukyu Islands: Okinawa, Kombu, 9 Oct. 1937, *S. Tawada* 766 (HT: ?; IT: L).

Illustrations (Books): C-C Hsu, *Taiwan Grasses* (1975) (512 as var. *reticulmis*).

Derivation (Clifford & Bostock 2007): Gk. leptaleos, delicate. Habit of plant slender.

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

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Stolons absent or present. Culms geniculately ascending, 20–40 cm long. Leaf-sheaths glabrous on surface or pubescent. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades 2–5(–10) cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins glabrous or tuberculate-ciliate, hairy at base. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, ascending, arcuate, unilateral, 2–7 cm long. Rhachis narrowly winged, with rounded midrib, 0.3–0.5 mm wide. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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, acuminate, 1.2–1.5 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, 5 -veined. Upper glume surface pubescent, with verruculose hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, puberulous or pubescent, with verruculose hairs. Fertile lemma elliptic, 1.2–1.5 mm long, cartilaginous, much thinner on margins, purple or black, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.4 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China, Eastern Asia. Japan, Nansei-Shoto, Taiwan.

Digitaria leptorhachis (Piger) Stapf. Prain, *Fl. Trop. Afr.* 9: 462 (1919).

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

TYPE from Senegal. **Basionym or Replaced Name:** *Panicum leptorhachis* Pilg., *Bot. Jahrb. Syst.* 30(1): 119 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Senegal: auf trocknen Standorten, 1880, *Lecard 252* (HT: P; IT: K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (120, 497 as *D. chevalieri*, *D. nitens*).

Derivation (Clifford & Bostock 2007): Gk. leptos, narrow; rhachis, backbone; Inflorescence with a slender central axis.

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

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms decumbent, 30–100 cm long, 1–2 mm diam., wiry, rooting from lower nodes. Culm-nodes glabrous (rarely) or bearded. Ligule an eciliate membrane. Leaf-blades 5–20 cm long, 2–6 mm wide. Leaf-blade surface glabrous (rarely) or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 5–12(–17), digitate or borne along a central axis, unilateral, 4–11 cm long. Central inflorescence axis 0–10 cm long. Rhachis wingless, angular, glabrous on surface or with scattered hairs. Raceme-bases brief or filiform. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal.

Sterile Spikelets. Basal sterile spikelets absent or rudimentary.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.4–2 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 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, 7 -veined, pubescent, hairy between veins, acute. Fertile lemma elliptic, 1.4–2 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Gambia, Ghana, Ivory Coast, Mali, Nigeria, Senegal, Togo, Gabon, DRC. Sudan. Tanzania. Zambia.

Digitaria leucites (Trin.) Henrard. *Meded. Herb. Leid.* No. 61, 6 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Milium velutinum* DC., *Cat. Pl. Horti Monsp.* 126 (1813); *Panicum leucites* Trin., *Gram. Panic.* 85 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: Cultivated in Hort. Monsp. from seeds send in 1804 by Sessi from Mexico (MPU-DC; IT: US (fragm. ex hb. DC)). *Milium filiforme* H. M [Madrid]. 1808.

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (394).

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

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Stolons absent or present. Culms geniculately ascending, 30–90 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades 5–12 cm long, 3–7 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, digitate, unilateral, 7–10 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular. 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, acute, 2.5–3 mm long, falling entire.

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, 3 -veined. Upper glume surface pilose, hairy between veins. 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, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 2.5–3 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. Mexico. Central Mexico, Gulf (Mexico), Southwest Mexico. **Mesoamerica.** Guatemala, Honduras.

TDWG4. Distrito Federal, Mexico State, Morelos, Puebla. Veracruz. Jalisco, Michoacan, Oaxaca.

Digitaria leucostachya (Domin) Henrard. *Monogr. Gen. Digitaria*, 399 (1950).

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, Queensland. **Basionym or Replaced Name:** *Panicum leucostachyum* Domin, *Biblioth. Bot.* 85: 299 (1915). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Domin s.n.*, Jan 1910, Australia: Queensland: auf den Sandfeldchen bei der Mündung des Russell River ST: *Domin s.n.*, Feb 1910, Australia: Queensland: die Sandhgel der Dividing Range, vstlich von Pentland" ST: *Domin s.n.*, Apr 1910, Australia: Queensland: Stradbroke Island in der Moreton Bay.

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (218), J.C.Tothill.& J.B.Hacker. *The grasses of southern Queensland* (1983) (194(16)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (400).

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

Derivation (Clifford & Bostock 2007): Gk. leukos, white; stachys, ear of corn. The spikelets are white and sometimes invested with copious white hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths sparsely hairy. Culms erect, 40–80 cm long. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane, obtuse. Leaf-blades 10–25 cm long, 2–4 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 12–25 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 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, acute, 2.25–2.75 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. 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, acuminate. Fertile lemma elliptic, 2.25–2.75 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland, New South Wales.

TDWG4. Darwin & Gulf. North, Central, South East, Inland. Coast.

Digitaria longiflora (Retz.) Pers. *Syn.* 1: 85 (1805).

Accepted by: R.J.Soreng et al., *Catalogue of 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 *D. preslii*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from India. **Basionym or Replaced Name:** *Paspalum longiflorum* Retz., *Observ. Bot.* 4: 15 (1786). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Malabar, ad margines agrorum, *Kvniq s.n.* (LT: LD; ILT: BM, K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, T. 40), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (396, Fig. 333), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (377, Fig. 141), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (514), C-C Hsu, *Taiwan Grasses* (1975), K.M.Mathew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 750 & Pl. 751), H.J.Noltie, *The Grasses of Bhutan* (2000) (733, Fig. 45), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (57, Fig. 45), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (71, Pl. 25), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler, *Grasses of New South Wales*, 4th edn (2008) (219), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(17)), 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) (371), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (173, Fig. 110), W.Burger, *Flora Costaricensis* 15, *Gramineae: Fieldiana Botany New Series* 4 (1980) (189, Fig. 62), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (258 & 590 as *D. cuvipes*, *D. eriolepis*, *D. flexilis*, *D. preslii*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 765), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:47(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);, F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): *L. longus*, long; flos, flower. Having long spikelets.

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

Habit, Vegetative Morphology. Annual or perennial, short-lived, mat forming. Stolons present. Culms rambling, 10–60 cm long. Leaf-sheaths glabrous on surface or hirsute. Ligule an eciliate membrane. Leaf-blades 1–9 cm long, 1–5 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 1–10 cm long. Rhachis broadly winged, with rounded midrib. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic, dorsally compressed, 1.2–1.8 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 puberulous or pubescent, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, puberulous or pubescent, with verruculose hairs, acute. Fertile lemma elliptic, 1.2–1.8 mm long, cartilaginous, much thinner on margins, pallid or grey or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (2 refs TROPICOS), or 18 (1 ref TROPICOS), or 36 (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, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Middle Atlantic ocean, Western Indian ocean. Benin, Burkina, Gambia, Ghana, Ivory Coast, Liberia, Mali, Senegal, Sierre Leone. Gabon, Rwanda, DRC. Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal. Madagascar. **China, Eastern Asia.** China South Central, Hainan, China Southeast. Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Assam, Bangladesh, Eastern Himalaya, India, Nepal, Pakistan, Sri Lanka. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Singapore, Philippines. New Guinea. **Australia.** Western Australia, Northern Territory, Queensland, New South Wales. **Northwestern Pacific.** New Caledonia, Samoa. Caroline Is. **Southeastern USA.** Florida. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil.** Costa Rica. Bermuda, Cuba, Leeward Is, Windward Islands, Trinidad-Tobago. Guyana. Colombia.

TDWG4. Fujian, Guangdong, Guangxi, Hunan, Jiangxi. Guizhou, Sichuan, Yunnan. Darjeeling, Bhutan. Assam, Manipur. Kerala, Karnataka. Orissa, West Bengal. Kimberley, Ereman. Darwin & Gulf, Central Australia. North, Central, South East, Inland. Coast.

Digitaria macroblephara (Hackel) Paoli. Stefan. & Paoli, *Miss. Somal. Ital. Merid.*, 1913, *Relaz.*, 245 (1916).

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

TYPE from Somalia. **Basionym or Replaced Name:** *Panicum macroblepharum* Hack., *Mem. Herb. Boissier* 20: 7 (1900)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Keller 136*, 1891, Somalia: Laku (W; IT: US-1126064 (fragm.)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (418).

Derivation (Clifford & Bostock 2007): as for *Macroblepharus*. The glumes and sterile lemma bear copious long hairs.

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

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Stolons present. Butt sheaths pubescent. Culms geniculately ascending or decumbent, 15–100 cm long, wiry. Culm-nodes bearded. Ligule an eciliate membrane. Leaf-blades 3–15 cm long, 1–5 mm wide. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 2–11, digitate, unilateral, 2–20 cm long. Central inflorescence axis 0–3 cm long. Rhachis wingless, angular. 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, dorsally compressed, 2.2–3.5 mm long, with hairs extending 0.5 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.3 mm long, 0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. 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, 7 -veined, villous or setose or setose, hairy between veins (glabrous beside midvein), acute. Fertile lemma elliptic, 2–3.5 mm long, cartilaginous, much thinner on margins, grey or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda.

Digitaria madagascariensis Bosser. *Adansonia, n. s.*, 8: 518 (1968).

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: Massif de l'Ankaratra, au-dessus de la station forestiere de Manjakatempo; 2200 m., *Bosser 10824* (HT: P; IT: TAN).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (393, Fig 144).

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

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped moderately or densely. Rhizomes absent or elongated. Culms geniculately ascending or decumbent, 50–90 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades 5–20 cm long, 2.5–4 mm wide. Leaf-blade surface glabrous or pilose, densely hairy.

Inflorescence. Inflorescence composed of racemes. Peduncle pubescent above. Racemes 2–3, paired or digitate, unilateral, 4–15 cm long. Rhachis angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, unequal, 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, acute, 2.2–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.75–0.8 length of spikelet, membranous, 3–5 -veined. Upper glume surface pubescent, hairy between veins. Upper glume hairs yellow. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, bearing yellow hairs, acute. Fertile lemma ovate, 2.2–2.6 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

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

Digitaria maitlandii Stapf & C. E. Hubbard. *Kew Bull.* 1927, 266 (1927).

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>: *fide* TROPICOS and Kew Synonymy Database: Tropical Africa: Uganda: Masaka, Mbarara road, on roadside and in plains, Oct 1925, *Maitland 766* (HT: K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (420 & 43, 367 as *D. apiculata*, *D. keniensis*).

Derivation (Clifford & Bostock 2007): in honor of Thomas Douglas Maitland (1885–1978) Scots-born British colonial economic botanist.

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

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms 25–100 cm long. Ligule an eciliate membrane. Leaf-blades 5–30 cm long, 2–5 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, unilateral, 4–10 cm long. Central inflorescence axis 1–4 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.8–2.2 mm long, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, clasping, 0.1–0.3 mm long, 0.05 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.3–0.6 mm long, 0.15–0.25 length of spikelet, membranous, 0–3 -veined. Upper glume primary vein absent or distinct. Upper glume surface pubescent, with clavate hairs. Upper glume apex emarginate or obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–5 -veined, glabrous or pubescent, with clavate hairs, ciliate on margins, acute. Fertile lemma elliptic, 1.8–2.2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

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

Country /Province /State. **West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa.** Burundi, Rwanda, DRC. Kenya, Tanzania, Uganda. Malawi, Mozambique, Zimbabwe. Limpopo, Mpumalanga, Swaziland, Eastern Cape.

Digitaria maniculata Stapf. Prain, *Fl. Trop. Afr.* 9: 466 (1919).

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: *Vanderyst 5177*, Zaire: Standley Pool District: on river banks near Chenul (K).

ST: *Vanderyst 5179*, Zaire: Standley Pool District: on river banks near Chenul (K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (426).

Derivation (Clifford & Bostock 2007): L. manus, hand; -ula, diminutive; -ata, resembling. The spikelet with its cuff-like lower glume fringed with hairs protruding from underneath resembles a little hand.

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

Habit, Vegetative Morphology. Annual, mat forming. Culms prostrate, 10–30 cm long, rooting from lower nodes. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades linear or lanceolate, 1–2.5 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 2–6 cm long. Rhachis narrowly winged, angular, 0.5–0.75 mm wide, smooth on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.5–2.5 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 lanceolate or oblong, dorsally compressed, 2.5–2.7 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, clasping, 0.2–0.25 length of spikelet, hyaline, pallid, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex emarginate or truncate. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy between veins, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pilose, hairy between veins, with verruculose hairs, with dorsal tufts of hair (at base), 2 hair tufts in all, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa, Southern Africa. DRC. Angola, Zambia, Zimbabwe. Namibia, Botswana.

Digitaria manongarivensis A. Camus. *Blumea*, 1: 110 & *Bull. Soc. Bot. France*, 82: 594 (1934).

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 11112 (P holo).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (427).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From the Manongarivo Massif, Madagascar.

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

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Cataphylls evident. Basal innovations extravaginal. Culms erect, 30 cm long, 0.5 mm diam., 3–4 -noded. Culm-nodes glabrous. Leaf-sheaths 10 cm long, mostly shorter than adjacent culm internode, pilose. Ligule an eciliate membrane, 1 mm long. Leaf-blades 4–9 cm long, 2 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins cartilaginous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 7–8 cm long. Central inflorescence axis 1 cm long. Rhachis narrowly winged. Raceme-bases linear. Spikelets in threes. Fertile spikelets sessile and pedicelled, 3 in the cluster. Pedicels present, glabrous, 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, dorsally compressed, compressed slightly, 2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume ovate, 2 mm long, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous, with verruculose hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, puberulous, with verruculose hairs, acute. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Digitaria mariannensis Merrill. *Philipp. Journ. Sc., Bot.* 9: 54 (1914).

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)*, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Guam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: R.C. McGregor 372, Oct 1911, Guam: Cabras Island (US-713069; IT: K).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (433, 435 & 364, 532, 793 as *D. kangaenensis*, *D. pectinata*, *D. virens*).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From the Mariana Islands.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms geniculately ascending, 30–60 cm long, rooting from lower nodes. Lateral branches ample. Leaf-sheaths glabrous on surface or puberulous. Ligule an eciliate membrane, 0.5–1.5 mm long, erose, truncate. Leaf-blades linear or lanceolate, 1.5–7.5(–12) cm long, 2–6 mm wide. Leaf-blade surface scaberulous, glabrous or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5(–8), digitate, unilateral, 2–12 cm long. Central inflorescence axis 0–1 cm long. Rhachis narrowly winged, angular. 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, 2.5–3.5 mm long, falling entire.

Glumes. Glumes both absent or obscure or one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.1–2.5 mm long, 0–0.1 length of spikelet, membranous, without keels, 0–1 -veined. Upper glume primary vein absent or obscure. Upper glume lateral veins absent. Upper glume surface villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.85–1 length of spikelet, membranous, (7–)9–13 -veined, with equidistant veins, smooth or scaberulous, rough on veins, glabrous or puberulous, ciliate on margins or setose on margins, truncate to acute. Fertile lemma elliptic, 2.5–3.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia, Australasia, Pacific.

Country /Province /State. **Malesia, Papuaia.** Java, Lesser Sunda Is, Philippines, Christmas I. New Guinea. **Australia.** Western Australia. **Northwestern Pacific.** Marianas.

Digitaria mattogrossensis (Pilg.) Henrard. *Meded. Herb. Leid. No.* 61, 1 (1930).

Regarded by K as a synonym (*D. corynotricha*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum adustum* var. *mattogrossensis* Pilg., *Bot. Jahrb. Syst.* 30(1): 131 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H. Meyer 508*, Mar 1899, Brazil: Mato Grosso (B; IT: US-80449 (fragm. ex B)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (110, Fig. 30), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (442).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Mato Grosso, Brazil.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 40–60 cm long, 1–5 -noded. Culm-nodes glabrous or pubescent. Leaf-sheaths mostly shorter than adjacent culm internode, hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long, brown. Leaf-blades erect, 7–15 cm long, 2–7 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 1–3, single or paired or digitate, unilateral, 6–13 cm long. Rhachis angular, 0.5–0.6 mm wide, scaberulous on margins. Spikelets clustered at each node. Fertile spikelets pedicelled, 4–5 in the cluster. Pedicels present, angular, unequal, scaberulous, glabrous, 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, dorsally compressed, 2.5–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 2.5–2.6 mm long, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 2.5–2.6 mm long, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins but central interspaces glabrous, with clavate hairs, acute. Fertile lemma elliptic, 2.4–2.5 mm long, 1.1 mm wide, cartilaginous, much thinner on margins, dark brown, shiny, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.2 mm long. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Embryo 0.4–0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Brazil West Central. Paraguay. TDWG4.

Digitaria mauritiana Henrard. *Monogr. Digitaria* 444–445, f. (1950).

Not on *GrassBase*.

TYPE from Mauritius. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mauritius, *E. Vaughan 1760* (HT: L; IT: K).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (445).

Derivation (Clifford & Bostock 2007): *L. -ana*, indicating connection. From Mauritius.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Mauritius.

Digitaria megasthenes Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 413 (1975).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Mozambique. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mozambique, Gurue: Torre & Correia 14749 (LISC holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41).

Derivation (Clifford & Bostock 2007): *Gk. megas, large; sthenos, strength; The central zone of the sterile lemma bears a patch of rigid hairs.*

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Rhizomes short. Culms erect or geniculately ascending, 70–110 cm long. Culm-nodes brown, glabrous. Leaf-sheaths antrorsely scabrous. Ligule a ciliolate membrane, 2–3 mm long. Leaf-blades 4–15 cm long, 2–7 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–11, digitate, in several whorls, erect, unilateral, 4–12 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.5 mm wide, smooth on surface or scabrous on surface, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–1.5 mm long, scabrous, 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, 1.9–2.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or acute. Upper glume ovate, 0.2–0.5 length of spikelet, membranous, without keels, 0–3 -veined. Upper glume surface scabrous, rough generally, glabrous. Upper glume apex entire or dentate, 2 -fid, acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7(–9) -veined, without grooves or sulcate, scabrous, rough throughout, glabrous or setose, acute. Fertile lemma oblong, 1.9–2.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Mozambique.

Digitaria melanotricha W.D. Clayton. *Kew Bull.*, 34(3): 559 (1980).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Tanzania. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tanzania: Ufipa District: Nsangu, *McCallum-Webster T77* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *Gk. melas, black; thrix, hair. Glumes and lower lemma invested in black hairs.*

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 10–20 cm long. Ligule an eciliate membrane. Leaf-blades involute, 2–6 cm long, 1 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2–4 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.5 mm wide, ciliate on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 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, 2–2.5 mm long, with hairs extending 1–1.5 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, gibbous, 0.5–0.66 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, 5 -veined, sulcate, pilose, bearing dark brown hairs, acute. Fertile lemma elliptic, gibbous, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, keeled, keeled below. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Tanzania.

Digitaria mezii Kanehira. *Fl. Micrones.* 401 (1933).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Marianas. **Basionym or Replaced Name:** *Digitaria marianensis* Mez, *Bot. Jahrb. Syst.* 59: 1 (1924)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *R. Gibbon 1179*, 8 Aug 1912, Marianas: Saipan, Inse. Sariguan, zwischen Felsblocken, 300 m, Grasart auf der Spitze des alten erlochenen Vulkans (B).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Carl Christian Mez (1866–1944) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Rhizomes absent. Stolons absent. Culms erect, 20 cm long, without nodal roots. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths smooth or scaberulous, glabrous on surface. Ligule an eciliate membrane, brown, erose. Leaf-blades 2–3 cm long, 1 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, appressed, unilateral, 3–6 cm long. Rhachis narrowly winged, with sharp-edged midrib, angular, smooth on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, smooth, 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 or oblong, dorsally compressed, 3.1–3.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.15 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.5–0.6 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 lanceolate, 1 length of spikelet, membranous, 5 -veined, pubescent, acute. Fertile lemma lanceolate, 3 mm long, cartilaginous, much thinner on margins, yellow, without keel, 5 -veined, more than 3-veined. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Northwestern Pacific. Marianas.

Digitaria milanjiana (Rendle) Stapf. *Prain, Fl. Trop. Afr.* 9: 430 (1919).

Accepted by: R.J.Soreng et al., *Catalogue of 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 Malawi. **Basionym or Replaced Name:** *Panicum milanjanum* Rendle, *Trans. Linn. Soc. London, Bot.* 4: 56 (1894). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *A. Whyte s.n.*, Oct, Malawi: Mount Milanje (BM).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (457, 459 & 460, 80, 224, 236, 268, 296, 368, 466, 579, 688, 723 as

var. *absconda*, *D. boivinii*, *D. endlichii*, *D. endlichii* var. *meziana*, *D. exasperata*, *D. fusca*, *D. gracilentia*, *D. kilimandscharica*, *D. mombasana*, *D. polevansii*, *D. setivalva*, *D. swynnertonii*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Milanji, Malawi.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes elongated. Stolons absent or present. Butt sheaths herbaceous, not bulbous or thickened and forming a bulb (rarely), glabrous or pubescent. Culms erect or geniculately ascending or decumbent, 20–250 cm long, without nodal roots or rooting from lower nodes. Culm-nodes glabrous. Ligule an eciliate membrane. Leaf-blades 15–30 cm long, 3–13 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–18, digitate, straight, unilateral, 5–25 cm long. Central inflorescence axis 0–6 cm long. Rhachis narrowly winged, angular, glabrous on surface or with scattered hairs. 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 lanceolate, dorsally compressed, (1.7–)2.5–3(–3.5) mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.5 mm long, 0.1 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.33–0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or pubescent. Upper glume margins ciliate. Upper glume hairs dark brown or purple. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, scabrous, rough on veins, glabrous or pubescent or setose (sometimes), ciliate on margins, bearing yellow hairs or dark brown hairs or purple hairs, acute. Fertile lemma elliptic, 1.7–3.5 mm long, cartilaginous, much thinner on margins, grey or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe (*), Africa, Tropical Asia, Australasia (*), North America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa.** DRC. Ethiopia (inc. Eritrea), Somalia. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Botswana, Limpopo. **Malesia, Papuasia.** Philippines. New Guinea PNG. New Guinea. **Australia.** Queensland (*), New South Wales (*). Fiji (*), New Caledonia. **Southeastern USA, Mexico.** Florida. Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico.

Hidalgo, Tamaulipas. Veracruz. Jalisco. Tabasco.

Digitaria minima R.D. Webster. *Brunonia*, 6(2): 192 (1984).

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, Queensland. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Queensland: South Kennedy Dist., *Simon 3270* (HT: BRI).

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. least. Smallest of the known species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 30–60 cm long, 3–6 -noded. Culm-nodes glabrous. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface, outer margin glabrous. Ligule an eciliate membrane, 0.45–0.75 mm long, erose, obtuse. Leaf-blades spreading or reflexed, 0.5–5.7 cm long, 1–2 mm wide. Leaf-blade surface smooth or scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, borne along a central axis, ascending, unilateral, 0.7–3.5 cm long, bearing 8–20 fertile spikelets on each. Central inflorescence axis 1.5–3 cm long. Rhachis wingless, angular, 0.2–0.27 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 1.4–2 mm long, smooth or scabrous, glabrous, 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, dorsally compressed, 1.2–1.55 mm long, 0.47–0.55 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblong or ovate, 0.1–0.2 mm long, 0.1–0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume elliptic, 1–1.3 mm long, 0.75–0.85 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous or pubescent. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 3–7 -veined, distinctly veined, glabrous or pubescent, hairy between veins or between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 1.2–1.55 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acute, mucronate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. North, Central, South East.

Digitaria minoriflora Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 398 (1975).

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, Mansa: Anton-Smith 485 (SRGH holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969).

Derivation (Clifford & Bostock 2007): *L. minor*, lesser; flos, flower. Spikelets smaller than those in a related species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Culms erect, 10–40 cm long. Culm-internodes distally glabrous. Culm-nodes brown, glabrous or pubescent. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1–2 mm long, truncate. Leaf-blades 5–15 cm long, 2–5 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous or pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 7–11, borne along a central axis, unilateral, 3–7 cm long. Rhachis narrowly winged, angular, 0.3 mm wide, smooth on surface, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, angular, unequal, 0.5–2.5 mm long, scabrous, ciliate, hairy at tip, with 0.5–1 mm long hairs, 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, 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 oblong, 0.33–0.5 length of spikelet, hyaline, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume surface pilose. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 3–5 -veined, pubescent, acute. Fertile lemma oblong, 1.5–1.7 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Digitaria mollicoma (Kunth) Henrard. *Blumea*, 1: 97 (1934).

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*).

TYPE from Philippines. **Basionym or Replaced Name:** *Paspalum molle* J. Presl, *Reliq. Haenk.* 1(4–5): 213 (1830) ; *Paspalum mollicomum* Kunth, *Enum. Pl.* 1: 47 (1833)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Haenke s.n.*, Philippines: Luzon (PR-197877-B; IT: B, BM, LE-TRIN-0495.01, MO, W).

Recent Synonyms: *Panicum hyatae* (Honda) Mak. & Nem., non Camus(1923), *Fl. Jap.* :1472 (1925).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (506 & 516), C-C Hsu, *Taiwan Grasses* (1975) (& as *D. magna*), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (57, Fig. 46), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (463), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 763).

Derivation (Clifford & Bostock 2007): *L. molle*, soft; coma, head of hair. Covered in whole or in part with downy hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Cataphylls inconspicuous. Stolons present. Culms erect or geniculately ascending, 25–50 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface or pilose. Ligule an eciliate membrane, 1–2 mm long, erose, truncate. Leaf-blades linear or lanceolate, 1.25–6 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3(–5), paired or digitate, unilateral, 2.5–12.5 cm long. Central inflorescence axis 0–2 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, tip discoid or 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, dorsally compressed, 1.7–2.5 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, 1.6–2.5 mm long, 0.8–1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume lateral veins transversely connected at apex. Upper glume surface pubescent, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, prominently veined, with equidistant veins, with veins transversely connected at apex, pubescent, with verruculose hairs, acute. Fertile lemma elliptic, 1.7–2.5 mm long, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–0.9 mm long, pallid or red (pink).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. China, Eastern Asia. China Southeast. Taiwan. Indo-China, Malesia, Papuasia. Vietnam. Java, Malaya, Singapore, Moluccas, Philippines, Sumatra. New Guinea West Papua (Irian Jaya). New Guinea.

TDWG4. Anhui, Jiangxi, Zhejiang.

Digitaria monobotrys (Van der Veken) Clayton. *Kew Bull.* 29:524 (1974).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Tanzania. **Basionym or Replaced Name:** *Digitariopsis monobotrys* Van der Veken, *Bull. Jard. Bot. Etat* 27: 729 (1957)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Tanzania, Chapota: Bredo 6097 (BR holo).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms 25–30 cm long. Ligule an eciliate membrane. Leaf-blades 2–3 cm long, 2–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single, unilateral, 5–9 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 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, 2.5–2.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, spurred (0.5mm), 0.33–0.5 length of spikelet, membranous, without keels, 1–3 -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, 7 -veined, pilose, hairy below, ciliate on margins, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, pallid, keeled, lightly keeled, keeled below. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Tanzania.

Digitaria monodactyla (Nees) Stapf. Dyer, *Fl. Cap.* 7: 373 (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 Africa. **Basionym or Replaced Name:** *Panicum monodactylum* Nees, *Fl. Afr. Austral.* 3: 21 (1841)

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J.F. Drige s.n.*, no date, South Africa: Natal: in planitie sabulosa ad pedem montium Witteberge inter Leeuwenspruit et Rietvalei, alt. 5000 ft (Tulbagh) (L; ILT: K, US-1126054 (fragm.)). LT designated (as type) by Henrard, *Monogr. Digitaria* 469 (1950).

ST: *Ecklon s.n.*, Dec, South Africa: Cape: in collibus graminosis Adovensibus inter flumina Sonntagsrivier et Bosjesmanrivier, alt. III (Uitenhage).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (417, Fig 347), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (469).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): Gk. monos, one; daktylos, finger. Inflorescence a solitary raceme.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–100 cm long. Ligule an eciliate membrane. Leaf-blades filiform or linear, 4–20 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 6–20 cm long. Rhachis narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 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, 2.5–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.2 mm long, 0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, gibbous, 0.66–0.75 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, 5 -veined, pilose, bearing yellow hairs, acute. Fertile lemma elliptic, gibbous, 2.5–4 mm long, cartilaginous, much thinner on margins, light brown, keeled, keeled below. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. DRC. Tanzania. Angola, Zambia, Zimbabwe. Namibia, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Eastern Cape.

Digitaria monodii Veldkamp. *Blumea*, 21(1): 57 (1973).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Van Leeuwen KEB 19*, Oct 1957, Indonesia: New Guinea: Irian Jaya: Andjai, 500 m (L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Charles Monod de Froideville (1896–1978) Dutch botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Cataphylls inconspicuous. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms 25–55 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long, erose, truncate. Leaf-blades 6.5–14 cm long, 1.5–3 mm wide. Leaf-blade surface scaberulous, pilose, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, borne along a central axis, unilateral, 2.5–6 cm long. Central inflorescence axis 2–4.5 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, tip discoid or 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, dorsally compressed, 1.85–2.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.4–1.65 mm long, 0.7–0.85 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins transversely connected at apex. Upper glume surface pubescent. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9–0.95 length of spikelet, membranous, (3–)5 -veined or 7 -veined, with equidistant veins or with unevenly spaced veins, with veins transversely connected at apex, pubescent, acute. Fertile lemma elliptic, 1.85–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.6–0.9 mm long, yellow.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasias. New Guinea West Papua (Irian Jaya). New Guinea.

Digitaria monopholis Clayton. *Kew Bull.*, 29(3): 524 (1974).

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: Tanzania, Kibondo to Kasulu: Mutch 21 (EA holo, DSM).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *monos*, solitary; *pholis*, scale of a snake. One glume fails to develop.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms 60 cm long. Ligule an eciliate membrane. Leaf-blades filiform, 7–12 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 8–9 cm long. Rhachis broadly winged, with sharp-edged midrib. 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 lanceolate, dorsally compressed, 5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, spurred (0.2mm), 0.25 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. 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, 7 -veined, pilose, acute. Fertile lemma elliptic, 5 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Tanzania.

Digitaria montana Henrard. *Meded. Herb. Leid. No.* 61, 9 (1930).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from New Caledonia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *B. Balansa* 3078, New Caledonia: Dumbea (L).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (472).

Derivation (Clifford & Bostock 2007): L. *mons*, mountain; -ana, indicating location. Growing on mountains.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths villous. Culms geniculately ascending, 30–60 cm long. Culm-nodes glabrous. Ligule an eciliate membrane. Leaf-blades 5–9 cm long, 2–4 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, digitate, unilateral, 4–9 cm long. Central inflorescence axis 0.5–2 cm long. Rhachis angular. 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 lanceolate or elliptic, dorsally compressed, acute, 1.2–1.8 mm long, with hairs extending 0.5–1 mm beyond apex, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.1 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or

acute. Upper glume elliptic, 3.5 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 3 -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, 5 -veined, pubescent, ciliate on margins, acute. Fertile lemma lanceolate or elliptic, 3.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Southwestern Pacific. New Caledonia.

Digitaria multiflora Swallen. *Journ. Wash. Acad. Sc.* 28: 7 (1938).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from British Honduras. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *C.L. Lundell 6730*, Jul-Aug 1936, Belize: El Cayo: in sandy pine-oak uplands, San Agustín, Mountain Pine Ridge (US-1647576; IT: LL, NY, S, US-1720533).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (473).

Illustrations (Journals): *Darwiniana* (45: 106, Fig.3 (2007)).

Derivation (Clifford & Bostock 2007): inflorescence with many spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 50–115 cm long. Lateral branches lacking or sparse. Leaf-sheaths longer than adjacent culm internode, keeled, glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 2–3 mm long, brown. Leaf-blades 10–28 cm long, 4–8 mm wide. Leaf-blade surface smooth or scaberulous, rough on both sides, pilose, sparsely hairy, hairy adaxially, with tubercle-based hairs. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 8–25, digitate, unilateral, 6–15 cm long. Central inflorescence axis 8–15 cm long. Rhachis angular, 0.3 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, unequal, 1–4 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, 1.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1 mm long, 0.9 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, 0.9 length of spikelet, membranous, 3 -veined, pubescent, hairy between veins, acute. Fertile lemma elliptic, 1.1 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Belize, El Salvador, Nicaragua.

Digitaria myriostachya (Hack.) Henrard. *Meded. Herb. Leid. No.* 61, 5 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 myriostachyum* Hack., *Oesterr. Bot. Z.* 51: 294 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Ule 1342*, Brazil: Santa Catarina: in campis Mayde satis prope Tuberao (W-23014). According to Henrard, *Monogr. Digitaria* 475 (1950) the number of the type collection is 1343, not 1342 as given in the protologue.

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (898, Fig 182), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (476).

Derivation (Clifford & Bostock 2007): Gk. myrios, countless; stachys, ear of corn. Inflorescence of many racemes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths pilose. Ligule an eciliate membrane, 2–3 mm long, erose, obtuse. Leaf-blades 10–20 cm long, 6–12 mm wide. Leaf-blade surface pubescent, hairy abaxially or on both sides. Leaf-blade margins crenate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, in several whorls, unilateral, 3–7 cm long, secondarily branched. Central inflorescence axis 9–18 cm long. Rhachis angular. Raceme-bases brief, hirsute. 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 elliptic, dorsally compressed, 2.5 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 1 mm long, 0.2 length of spikelet. Upper glume lanceolate, 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 lanceolate, 1 length of spikelet, membranous, 5 -veined, with unevenly spaced veins (close to margin), pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma lanceolate, 2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil South. Catarina, Rio Grande do Sul.

Digitaria myurus Stapf. Prain, *Fl. Trop. Afr.* 9: 477 (1919).

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: HT: A. Stolz 2619, no date, Mozambique: Kyimbila, in mountain meadows near Rulongwe, 6900 ft (K; IT: US-1347658).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (477).

Derivation (Clifford & Bostock 2007): Gk. mys, mouse; oura, tail. Inflorescence a spike-like panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 20–80 cm long. Ligule an eciliate membrane. Leaf-blades 10–30 cm long, 2–3 mm wide. Leaf-blade surface glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 3–7, borne along a central axis, in a multilateral false spike, appressed, unilateral, 2–6 cm long. Central inflorescence axis 7–15 cm long. Rhachis angular, glabrous on margins or setose on margins. Spikelets in pairs or clustered at each node. Fertile spikelets pedicelled, 2–6 in the cluster. Pedicels present, setose, 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 oblong, dorsally compressed, 1.8–2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblate, 0.6–0.8 mm long, 0.33 length of spikelet, hyaline, 0 -veined. Upper glume primary vein absent. Upper glume apex truncate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.8–1 length of spikelet, membranous, 3 -veined, glabrous, obtuse. Fertile lemma elliptic, 1.8–2.3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Tanzania.

Digitaria natalensis Stent. *Bothalia*, 3: 152 (1930).

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: C.J. Rensburg *PRET. HB. NO. 8630*, Jul 1929, South Africa: Natal: Umkomaas (PRE; IT: US-1504445).

Recent Synonyms: *Digitaria macroglossa* Henrard, *Monogr. Gen. Digitaria*, 419 (1950).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (481, 482, 483 & 626 as var. *stentiana*, *D. rigida*).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Natal, South Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Rhizomes short. Butt sheaths dark brown, pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms erect or geniculately ascending, 70–160 cm long. Culm-nodes brown, glabrous. Leaf-sheaths scaberulous, glabrous on surface. Ligule an eciliate membrane, 3–12 mm long. Leaf-blades 10–40 cm long, 3–7 mm wide. Leaf-blade surface scaberulous, rough on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 5–13, digitate, in several whorls, erect, unilateral, 15–20 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.8 mm wide, scabrous on surface, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–3.5 mm long, scabrous, 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, 2.8–4.2 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–1(–2) mm long, 0.1–0.33 length of spikelet, hyaline, without keels, 0–3 -veined. Lower glume surface glabrous or pubescent. Lower glume margins eciliate or ciliolate. Lower glume apex acute. Upper glume oblong, 0.4 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 oblong, 1 length of spikelet, membranous, 7 -veined, scabrous, rough throughout, pubescent or pubescent or setose, acute. Fertile lemma oblong, 2.5–4 mm long, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. $N = 9$ (1 ref TROPICOS). $2n = 18$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Mozambique. Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal, Western Cape, Eastern Cape.

Digitaria nealleyi Henrard. *Blumea*, 1: 94 (1934).

Regarded by K as a synonym (*D. sanguinalis*).

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, Texas. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Texas: without precise locality, 1884, G.C. Nealley (HT: W-23043).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (484).

Derivation (Clifford & Bostock 2007): in honor of Greenleaf Cilley Nealley (1846–96) United States plant collector.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA. Texas.

Digitaria neesiana Henrard. *Blumea*, 1: 99 (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:** *Trichachne velutina* Nees, *Fl. Bras. Enum. Pl.* 2(1): 90 (1829)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F. Sellow 1232*, no date, Brazil (B-W; IT: BAA-550 (fragm. ex B), US-86224 (fragm.)). Basis of *Poa vestitum* Kunth and *Digitaria neesiana* Henr..

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 122), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (486).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Christian Gottfried Daniel Nees von Esenbeck (1766–1858) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Butt sheaths pubescent, with tawny hairs, persistent and investing base of culm, with fibrous dead sheaths. Culms 50–100 cm long, 3–5 -noded. Ligule an eciliate membrane. Leaf-blades 2–6 mm wide. Leaf-blade surface hirsute, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, digitate or borne along a central axis, unilateral, 7–15 cm long. Central inflorescence axis 4–5 cm long. Rhachis narrowly winged, angular. Spikelets in threes. 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 oblong, dorsally compressed, 3.5 mm long, with hairs extending 0.5–1 mm beyond apex, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 0.05 length of spikelet. Lower glume apex truncate. Upper glume ovate, 2.25 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, villous, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 3.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil. Bolivia, Colombia. Brazil West Central, Brazil Southeast.

TDWG4. Mato Grosso, Goias.

Digitaria neghellensis J.P. Lebrun. *Bull. Mus. Nation. Hist. Nat., B, Adansonia, Ser. 4*, 10(3): 271 (1988).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Ethiopia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Ethiopia, Mt. Fitu: Rippstein 842 (ALF holo).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (249, Fig 100).

Derivation (Clifford & Bostock 2007): L. *-ensis*, denoting origin. From the vicinity of Neghelle in sothern Ethiopia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent. Butt sheaths herbaceous, not bulbous or thickened and forming a bulb. Culms 35–70 cm long. Ligule an eciliate membrane. Leaf-blade base amplexicaul. Leaf-blades lanceolate, 1–8 cm long, 2–5 mm wide. Leaf-blade surface pubescent, densely hairy, hairy on both sides. Leaf-blade margins cartilaginous.

Inflorescence. Inflorescence composed of racemes. Racemes 4–5, borne along a central axis, unilateral, 6–12 cm long. Central inflorescence axis 7–13 cm long. Rhachis wingless, angular. 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, dorsally compressed, 2.5–3 mm long, with hairs extending 1–2 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.5 mm long, 0.1–0.2 length of spikelet, membranous, without keels. Lower glume apex obtuse. Upper glume ovate, 1 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret ovate, 1 length of spikelet, membranous, villous, bearing white hairs, acute. Fertile lemma lanceolate, 2.5–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa, Temperate Asia.

Country /Province /State. Northeast tropical Africa. Ethiopia (inc. Eritrea). Arabian Peninsula. Oman.

Digitaria nematostachya (F. M. Bailey) Henrard. *Monogr. Gen. Digitaria*, 487 (1950).

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 nematostachyum* F.M. Bailey, *Queensland Bot. Bull.* 16: 2 (1903). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: NT: *Hubbard & Winders 7668*, Australia (CANB; INT: BRI). NT selected by Webster, *Brunonia* 6: 193 (1983).

Recent Synonyms: *Digitaria tonsa* D.K.Hughes, *Bull. Misc. Inform. Kew* 1923: 313 (1923).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.Domin, *Bibliotheca Botanica* 85 (1915) (294, Fig.66 as *Panicum radiatum* f. *parviflorum*).

Derivation (Clifford & Bostock 2007): Gk. nema, thread; stachys, ear of corn. Branches of panicle thread-like.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 35–55 cm long, 7–12 -noded. Culm-nodes glabrous or pubescent. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface or pilose, outer margin glabrous. Ligule an eciliate membrane, 1–2.8 mm long, erose, acute. Leaf-blades 6–25 cm long, 3.5–7 mm wide. Leaf-blade surface smooth or scabrous, glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, the lowest whorled, ascending or spreading, unilateral, 13–30 cm long, bearing 16–30 fertile spikelets on each. Central inflorescence axis 2.5–11 cm long. Rhachis angular, 1 mm wide. Spikelet packing distant. Raceme-bases filiform, 10–70 mm long. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 0.5–1.5 mm long, scabrous, glabrous, 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 obovate, dorsally compressed, 1.7–2.1 mm long, 0.7–0.8 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblong or ovate, 0.25–0.6 mm long, 0.15–0.25 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume ovate, 1.5–1.7 mm long, 0.5–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1.6–1.75 mm long, 0.8–0.9 length of spikelet, membranous, 7 -veined, with veins transversely connected at apex, glabrous, acute. Fertile lemma elliptic, 1.8–2 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland. North, Central, South East.

Digitaria nodosa Parl. *Pl. Nov.* 39 (1842).

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 Canary Is. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: Canary Islands.

Illustrations (Books): L.Boulos, *Flora of Egypt* 4 (2005) (309, Pl. 91), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (499 & as *Panicum piriferum*).

Derivation (Clifford & Bostock 2007): L. nodus, knot; -osa, abundance. Culm nodes swollen.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes absent. Butt sheaths herbaceous, not bulbous or thickened and forming a bulb, pubescent. Culms 15–100 cm long. Culm-nodes glabrous. Ligule an eciliate membrane. Leaf-blades 3–30 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–12(–25), digitate or borne along a central axis, unilateral, 3–15 cm long, simple or secondarily branched. Central inflorescence axis 0–10 cm long. Rhachis wingless, angular. 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, dorsally compressed, 2–3 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.4 mm long, 0.05–0.1 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.66–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent or 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, 7 -veined, pilose or villous, bearing white hairs, acute. Fertile lemma elliptic, 2–3 mm long, cartilaginous, much thinner on margins, grey or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG), Continent. Africa, Temperate Asia, Tropical Asia.

Country /Province /State. Northern Africa, Macaronesia, West tropical Africa, Northeast tropical Africa, East tropical Africa. Egypt, Morocco, Tunisia. Canary Is, Cape Verde. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania. Western Asia, Arabian Peninsula. Oman. Indian Subcontinent. Pakistan.

TDWG4. Rajasthan.

Digitaria nuda Schum. *Schum. & Thonn. Beskr. Guin. Pl.* 45. (1827).

Accepted by: R.J.Soreng et al., *Catalogue of 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)*, W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from Ghana. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *P. Thonning 367*, Ghana (C; IT: L).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, T. 41), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (57, Fig. 47), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (379), S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 121), S.A.Renvoize, *The Grasses of Bahia*, 1984 (252, Fig. 94), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (121, Fig. 34), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (82, 178, & 184 as *D. borbonica*, *D. diamesum*, *D. digitata*).

Derivation (Clifford & Bostock 2007): L. bare. Lemmas glabrous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 15–100 cm long. Ligule an eciliate membrane. Leaf-blades 2–20 cm long, 3–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–20, digitate, unilateral, 4–20 cm long. Rhachis narrowly winged, angular, glabrous on surface or with scattered hairs, scabrous on margins. Spikelet packing contiguous, 0.3 their length apart. Spikelets appressed, in pairs. Fertile spikelets pedicelled, 2 in the cluster, all alike or heteromorphic (as to indumentum). Pedicels present.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, 1.7–2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.6–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, puberulous or pubescent, hairy between veins, eciliate on margins or ciliate on margins, acute. Fertile lemma elliptic, 1.7–2.5 mm long, cartilaginous, much thinner on margins, grey or dark brown, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea, ciliate. Palea cartilaginous.

Distribution (TDWG), Continent. Africa, Tropical Asia, Pacific, North America, South America.

Country /Province /State. Northern Africa, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Tunisia. Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia, Zimbabwe. Mauritius, Madagascar. **Malesia.** Borneo, Cocos (Keeling) Is, Java, Lesser Sunda Is, Malaya, Singapore, Moluccas, Philippines, Sulawesi, Sumatra. **Southwestern Pacific, Northwestern Pacific.** New Caledonia. Caroline Is. **Southeastern USA, Mexico.** Florida. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Brazil, Southern South America.** French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia. Brazil Northeast. Paraguay.

TDWG4. Salta. Formosa. Puebla. San Luis Potosi. Veracruz. Sinaloa. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas, Quintana Roo, Yucatan.

Digitaria oraria R.D. Webster. *Brunonia*, 6(2): 195 (1984).

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: *R.L. Specht 201*, 8 Apr 1948, Australia: Northern Territory: Arnhem Land, Little Lagoon (CANB; IT: BRI, L, MEL, NSW, PERTH, US-2116210).

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. ora*, coast; -aria, pertaining to. Growing on beaches or adjacent rocky cliffs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Cataphylls inconspicuous. Culms 40–70 cm long, 2–5 -noded. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 0.3–0.8 mm long. Leaf-blades 2–8 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes digitate, unilateral, 8.5–14 cm long. Rhachis angular, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 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, 2.2–2.4 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, 3–5 -veined. Upper glume surface pubescent, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with verruculose hairs, acute. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland.

TDWG4. Darwin & Gulf, Victoria R & Barkly Tableland. Central, South East.

Digitaria orbata D. K. Hughes. *Kew Bull.* 1923, 312 (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: HT: *E.M. Bowman s.n.*, Australia: Queensland: Herbert's Creek (K; IT: BM, MEL, US-928129). Veldkamp, *Blumea* 21: 73 (1973) gives BM as HT.

Illustrations (Books): J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(18)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (508).

Derivation (Clifford & Bostock 2007): *L. orbo*, deprive. Glumes reduced or absent.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–85 cm long, 3–5 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1.6–4 mm long. Leaf-blades 6–25 cm long, 1.8–5.5 mm wide. Leaf-blade surface scabrous, pilose. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–10, borne along a central axis, unilateral, 7–16 cm long. Central inflorescence axis 2–10 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 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 oblong or ovate, dorsally compressed, acute, 1.3–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.1–0.25 length of spikelet, hyaline, without keels, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume surface glabrous. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, 3 -veined, glabrous, obtuse. Fertile lemma elliptic, 1.3–1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. North, Central, South East, Inland. Coast, Western Slopes.

Digitaria pampinosa Henrard. *Monogr. Gen. Digitaria*, 514 (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 Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Chase 10383*, Dec 1929, Brazil: Minas Gerais: Diamantina, Serra de San Antonio, alt. 1200–1300 m, erect, culms solitary or few, grassy campo (L-936,345–131; IT: US-1500787).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (514).

Derivation (Clifford & Bostock 2007): *L. pampinosa*, leafy. Plants freely branching from the base.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms 25–70 cm long, 3-noded. Culm-internodes distally glabrous. Culm-nodes glabrous or bearded. Leaf-sheaths longer than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule a ciliate membrane. Leaf-blades 8–10 cm long, 2–3 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 5–10 cm long. Rhachis angular, scaberulous on margins. Raceme-bases pubescent. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic, dorsally compressed, 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, 3–5-veined. Upper glume surface pubescent, hairy between veins, with capitate hairs.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7-veined, pubescent, hairy on veins, with capitate hairs. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, purple, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Digitaria panicea (Sw.) Urb. *Symb. Antill.* 8: 23 (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).

Basionym or Replaced Name: *Milium paniceum* Sw., *Prodr.* 24 (1788)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Swartz s.n.*, (S; IT: M, US (fragm. ex M)).

Illustrations (Books): A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (174, Fig. 111), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (516).

Derivation (Clifford & Bostock 2007): *L. -ea*, resembling. Resembling *Panicum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 20–45 cm long. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane. Leaf-blades erect or ascending, flexuous, conduplicate or involute, 5–10 cm long, 3–6 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–5, digitate, erect or ascending, unilateral, 5–10 cm long. Rhachis narrowly winged, angular, 0.75 mm wide. Spikelet packing lax. Spikelets in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster. 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, acute, 1.25–1.5 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, 3–5-veined. Upper glume surface pubescent, with capitate hairs. 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, pubescent, with capitate hairs, acute. Fertile lemma elliptic, 1.25–1.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. $2n = 36$ (1 ref TROPICOS).

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica, Caribbean. Guatemala, Honduras, Panama. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico.

Digitaria paniculata Soderstr. ex R. McVaugh. *Fl. Novo-Galiciana*, 14: 143 (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 Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mexico: Jalisco: open oak woods, seaward-facing slopes 13 mi SSW of Autlan, R.L. Wilbur & C.R. Wilbur 2267 (HT: MICH).

Illustrations (Books): R.McVaugh, *Flora Nova-Galiciana* Vol.14 *Gramineae* (1983).

Derivation (Clifford & Bostock 2007): L. panus, thread; -ula, diminutive; -ata, possessing. Inflorescence open with thread-like pedicels.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms slender, 15–50 cm long. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 3–10 cm long, 3–8 mm wide. Leaf-blade surface glabrous, hairless except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, digitate or borne along a central axis, unilateral, 2–4 cm long, secondarily branched. Central inflorescence axis 1–3 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 1–1.5 mm long or 2–2.5 mm long or 3–3.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.3–1.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.2–1.3 mm long, 0.8–0.9 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 elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, pubescent, acute. Fertile lemma elliptic, 1.3–1.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Southwest Mexico. Jalisco.

Digitaria papposa (R.Br.) Beauv. *Agrost.* 51 (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).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum papposum* R. Br., *Prodr.* 192 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brown 6120*, Australia (K).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (518).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): Gk. pappos, grandfather. With long silky hairs on the glumes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 40–70 cm long, 6–11 -noded. Culm-nodes glabrous. Leaf-sheaths without keel, antrorsely scabrous, glabrous on surface, outer margin glabrous. Ligule an eciliate membrane, 2–4.8 mm long, erose, acute. Leaf-blades 9–27 cm long, 3–8 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, the lowest whorled, spreading, unilateral, 12–22 cm long, bearing 16–24 fertile spikelets on each, secondarily branched. Central inflorescence axis 6–12 cm long. Rhachis angular, 0.5–0.6 mm wide. Spikelet packing distant. Raceme-bases filiform, 10–240 mm long, pubescent, hairy at base. Spikelets solitary or in pairs or clustered at each node. Fertile spikelets pedicelled, 1–4 in the cluster. Pedicels present, 1–5 mm long, scabrous, glabrous, 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, dorsally compressed, 1.9–2.5 mm long, 0.6–0.8 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume oblong or ovate, 0.2–0.4 mm long, 0.1–0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume surface setose. Lower glume apex obtuse or acute. Upper glume elliptic, 1.4–2.5 mm long, 1 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface setose. 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, 7 -veined, prominently veined, with veins transversely connected at apex, villous or setose, ciliate on margins, acute. Fertile lemma elliptic, 1.7–2.3 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley. Darwin & Gulf, Victoria R & Barkly Tableland. North.

Digitaria paraguayensis Henrard. *Meded. Herb. Leid. No.* 61, 15 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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* 94, 18 Feb 1874, Paraguay: Paraguari: sur les collines incultes [26:S, 57:00WW (L-908,93–551; IT: BAA, G, US-1445139 (ex P, fragm. ex L)), US-93340 (fragm. ex G)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (124, Fig. 35), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (520).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Paraguay.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, slender, 35–40 cm long. Culm-internodes distally glabrous. Lateral branches ample. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking or ciliate. Ligule an eciliate membrane, 0.5–0.6 mm long, brown, truncate. Leaf-blades filiform, 6–15 cm long, 1–1.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes, exerted or embraced at base by subtending leaf. Racemes 1, single, unilateral, 3–7 cm long. Rhachis angular, 0.3–0.5 mm wide, pubescent on surface. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, angular, unequal, 0.6–2.5 mm long, scaberulous, ciliate, hairy at tip, 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, dorsally compressed, 1.9–2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.3 mm long, 0.15 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 1.7–1.8 mm long, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1.9–2 mm long, 1 length of spikelet, membranous, 7 -veined, pubescent, with clavate hairs, acute. Palea of lower sterile floret 0.2 mm long. Fertile lemma elliptic, 1.7–1.8 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.2–0.3 mm long. Anthers 3, 0.8–0.9 mm long. Caryopsis with adherent pericarp, 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Paraguay.

TDWG4. Corrientes.

Digitaria parodii Jacques-Felix. *Bol. Soc. Argent. Bot.* 12: 230 (1968).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Rep. Centre Afr., Zabingui: Tisserant 2640 (P holo, K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. As for *Parodiochloa*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, mat forming. Culms prostrate, slender, 10–20 cm long. Culm-nodes brown, glabrous. Leaf-sheaths pilose. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades linear or lanceolate, 1–3 cm long, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–4), paired, unilateral, 3–7 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.5–0.8 mm wide, smooth on margins. Raceme-bases filiform. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–3 mm long, smooth, 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, 1.8–2.1 mm long, falling entire.

Glumes. Glumes two, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, with verruculose hairs. Upper glume hairs white or purple. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 0.8–0.9 length of spikelet, membranous, 7 -veined, pubescent, with verruculose hairs, bearing white hairs or purple hairs, acute. Fertile lemma oblong, gibbous, 1.5–2 mm long, cartilaginous, much thinner on margins, yellow or mid-green, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, South tropical Africa. Central African Republic, DRC. Chad. Zambia.

Digitaria parva Swallen. *Contrib. U. S. Nat. Herb.* 29: 266 (1948).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: J.R. Swallen 7002, 4–6 Mar 1944, Brazil: Para, Amapa, 2.3 N Lat, -55.53 W Long. (US-1866866; IT: L). L (mistakingly) lists their specimen as HT.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): spikelets tiny.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 18–50 cm long. Culm-internodes distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths mostly shorter than adjacent culm internode, keeled, glabrous on surface or pilose. Ligule an eciliate membrane, 1–2.5 mm long. Leaf-blades 4–8 cm long, 2–5 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–9, digitate, unilateral, 3–6 cm long. Rhachis angular. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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, 1 mm long, 0.4 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, hairy between veins, with clavate hairs. Upper glume margins ciliolate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 0.9 length of spikelet, membranous, 5 -veined, pubescent, hairy between veins, with clavate hairs, ciliolate on margins. Fertile lemma elliptic, 1 mm long, cartilaginous, much thinner on margins, purple or black, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil North.

Digitaria parviflora (R.Br.) D. K. Hughes. *Kew Bull.* 1923, 311 (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 parviflorum* R. Br., *Prodr.* 192 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Brown 6117*, Australia: New South Wales: Port Jackson (K (left-hand and right-hand specimens); ILT: BM). LT designated by Henrard,

Monogr. *Digitaria* 523 (1950). (J.) "apud Portum Jackson, inclusis ripis aestuarii Hunter's River vel Coal River.", Note in IGS: "N.S. Wales, Port Jackson, Brown 6116, fide Hughes."

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (219), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(19)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (529, 714 as *D. patula*, *D. striata*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. parvus*, small; flos, flower. Spikelets small or with few florets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 40–90 cm long, 4–7 -noded. Culm-nodes glabrous. Leaf-sheaths without keel, antrorsely scabrous, outer margin glabrous. Ligule an eciliate membrane, 1.5–4 mm long, erose, obtuse or acute. Leaf-blades 3–35 cm long, 3–8 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 4–15, digitate, ascending, unilateral, 6–20 cm long, bearing 50–80 fertile spikelets on each. Central inflorescence axis 2–7 cm long. Rhachis angular, 0.3–0.4 mm wide, scabrous on margins. Spikelets in pairs or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present, 0.8–1.5 mm long, scabrous, glabrous, 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 obovate, dorsally compressed, 1.6–2.1 mm long, 0.6–0.7 mm wide, falling entire.

Glumes. Glumes reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.2–0.8 mm long, 0.1–0.4 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic, 1.6–2 mm long, 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, 1 length of spikelet, membranous, 7 -veined, prominently veined, glabrous or pubescent, hairy between veins or between veins but central interspaces glabrous, obtuse or acute. Fertile lemma elliptic, 1.6–2 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Europe (*), Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Queensland, New South Wales.

TDWG4. North, Central, South East, Inland. Coast.

Digitaria patagiata Henrard. *Monogr. Gen. Digitaria*, 525 (1950).

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: Guinea Gallica: environs de Kindia, *Felix Jaques* 258 (HT: P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (525).

Derivation (Clifford & Bostock 2007): *L. patagium*, gold edging on a tunic; -ata, possessing. The sterile lemma bears a conspicuous transverse band of hairs midway along its length.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, mat forming. Culms prostrate, 5–20 cm long, rooting from lower nodes. Leaf-sheaths hirsute. Leaf-sheath auricles erect. Ligule an eciliate membrane, 1–2.5 mm long. Leaf-blades 2.5–3 cm long, 1–2 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 1–6 cm long. Rhachis angular. Spikelet packing lax. 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 lanceolate, dorsally compressed, 3 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblong, clasping, 0.25–0.33 length of spikelet, hyaline, pallid, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pilose, hairy between veins, with verruculose hairs. 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, hairy between veins, with verruculose hairs, with dorsal tufts

of hair (at base), 2 hair tufts in all, acute. Fertile lemma elliptic, 2.7 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Guinea, Senegal.

Digitaria patens (Swallen) Henrard. *Blumea*, 1: 99 (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 USA. **Basionym or Replaced Name:** *Trichachne patens* Swallen, *Amer. J. Bot.* 19(5): 442, f. 5 (1932)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A.S. Hitchcock 5328 [*Amer. Gr. Nat. Herb.* 294], 24 Jul 1910, USA: Texas: near Lake Mitchell, San Antonio (US-927233; IT: LL).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (369), F.W.Gould, *The Grasses of Texas* (1975) (414, Fig. 222), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (527).

Derivation (Clifford & Bostock 2007): L. pateo, lie open. Panicle branches spreading or reflexed or habit open.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Butt sheaths pubescent. Culms erect, 40–90 cm long. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 1–4 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, ascending or spreading, unilateral, 5–11 cm long. Central inflorescence axis 5–10 cm long. Rhachis angular. Spikelet packing lax. 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 elliptic, dorsally compressed, 4 mm long, with hairs extending 1–2 mm beyond apex, falling entire. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, 0 -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 villous. Upper glume hairs white. 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, villous, bearing white hairs, acute. Fertile lemma elliptic, 3 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Mexico. Texas. Northeast Mexico, Northwest Mexico. Coahuila, Neuvo Leon. Sonora.

Digitaria pauciflora Hitchcock. *Proc. Biol. Soc. Wash.* 41: 162 (1928).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: Eaton 207, 10 Nov 1903, USA: Florida: Jenkins to Everglades (US-927603).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (375), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (530).

Derivation (Clifford & Bostock 2007): L. paucus, few; flos, flower. With few florets per spikelet or few spikelets per inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 50–100 cm long. Lateral branches sparse. Ligule an eciliate membrane. Leaf-blades 6–12 cm long, 2 mm wide. Leaf-blade surface hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 5–11 cm long. Rhachis angular. Spikelet packing lax. Raceme-bases filiform, 10–15 mm long. 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 elliptic, dorsally compressed, acute, 3.2 mm long, falling entire.

Glumes. Glumes two, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.2–0.5 mm long, 0.1 length of spikelet, hyaline. Lower glume apex erose, obtuse. Upper glume elliptic, 1 length of spikelet, membranous, without keels, 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, 7 -veined, glabrous, acute. Fertile lemma elliptic, 3.2 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southeastern USA. Florida.

Digitaria pearsonii Stapf. Prain, *Fl. Trop. Afr.* 9: 434 (1919).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Angola. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Lower Guinea: Angola: on the banks of small streams in clearings of dense forest at Granja San Luiz near Cazengo, *Pearson 2333*.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (531 & 372 as *D. lancifolia*).

Derivation (Clifford & Bostock 2007): in honor of Henry Harold Walsh Pearson (1870–1916) English-born South African botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, wiry. Culms rambling, 30–60 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades lanceolate, 2.5–12 cm long, 3–15 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 6–20, borne along a central axis, spreading, unilateral, 3–17 cm long, simple or secondarily branched, secondary branches racemulose (0.5–5cm). Central inflorescence axis 2.5–15 cm long. Rhachis wingless, angular. Spikelet packing lax. 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 lanceolate, dorsally compressed, 1.7–2.3 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.3 mm long, 0.1 length of spikelet, membranous, without keels. Lower glume apex obtuse. Upper glume lanceolate, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, pubescent, acute. Fertile lemma ovate, 1.7–2.3 mm long, cartilaginous, much thinner on margins, light brown or dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa. Burundi, Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea). Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zimbabwe.

Digitaria pellita Stapf. Prain, *Fl. Trop. Afr.* 9: 447 (1919).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Angola. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Lower Guinea. Angola: Benguella; in Mumua woods at Campulua, *Gossweiler 2787!* (HT: K).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (537).

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 ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths. Basal innovations intravaginal. Culms erect, 100–300 cm long, 2 -noded. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches lacking. Leaf-

sheaths tight, mostly shorter than adjacent culm internode, striately veined, pubescent. Ligule a fringe of hairs, 3–4 mm long. Leaf-blades convolute, 25–35 cm long, 2–4 mm wide, stiff. Leaf-blade surface pubescent, densely hairy, hairy abaxially or on both sides. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 15–17 cm long. Central inflorescence axis 2–4 cm long, villous. Rhachis narrowly winged, angular, 1–1.5 mm wide, scabrous on margins. Spikelets appressed, in pairs or in threes or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present, angular, unequal, 1–4 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 oblong, dorsally compressed, acuminate, 3–3.5 mm long, with hairs extending 1–1.5 mm beyond apex, falling entire.

Glumes. Glumes dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, clasping, 0.3–0.6 mm long, 0.1–0.2 length of spikelet, hyaline, pallid, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 2–3 mm long, 0.6–0.8 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume margins ciliate. Upper glume hairs 1–1.5 mm long. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or oblong, 1 length of spikelet, membranous, pallid, 5 -veined, with equidistant veins, ciliate on margins, bearing hairs 0.5–1 mm long, acuminate. Fertile lemma lanceolate, 3–3.5 mm long, cartilaginous, much thinner on margins, light brown. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Angola.

Digitaria pennata (Hochst.) T. Cooke. *Fl. Bombay*, 2: 941 (1908).

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. **Basionym or Replaced Name:** *Panicum pennatum* Hochst., *Flora* 38: 197 (1855). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W. Schimper [Hb. abyss. Buch.] 1497*, 1853, Ethiopia: Agow: Gurrarfa (STR; IT: P).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (249, Fig. 100), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (240, Fig 139), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (540), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (50, Fig. 27).

Derivation (Clifford & Bostock 2007): peduncles villous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths thickened and forming a bulb, pubescent. Culms 15–100 cm long, wiry or woody. Ligule an eciliate membrane. Leaf-blades lanceolate, 2–8 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes, deciduous as a whole. Racemes 4–14, digitate, simply spaced or in several whorls, radiating, straight, unilateral, 7–25 cm long. Rhachis wingless, angular. Spikelet packing distant. Raceme-bases filiform, 35–120 mm long, plumose. Spikelets appressed, 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 lanceolate, dorsally compressed, 2.5–3 mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, ribbed, with equidistant veins, pubescent, hairy between veins, acute. Fertile lemma elliptic, 2.5–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania. **Arabian Peninsula.** Oman, Saudi Arabia. **Indian Subcontinent.** India, Pakistan.

TDWG4. Maharashtra, Rajasthan, Uttah Pradesh.

Digitaria perpusilla Pilger. *Engl. Jahrb.* 69: 253 (1938).

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*).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Clemens 6120*, Mar 1937, Northeast New Guinea: Morobe District: Sarawaket, c. 3000 m (B; IT: A, BRI, L, US).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (543).

Derivation (Clifford & Bostock 2007): L. very small. Dwarf annual.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 3–7 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane, 0.5 mm long, erose, truncate. Leaf-blades erect, linear or lanceolate or oblong, 0.5–1.5 cm long, 1–1.5 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Peduncle 0.5–1.5 cm long, glabrous. Racemes 1–2, single or paired, erect, unilateral, 1–2 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, tip discoid or 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 oblong, dorsally compressed, 1.6–1.8 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, 1.4–1.7 mm long, 0.8–0.95 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume lateral veins transversely connected at apex. 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, 7 -veined, with unevenly spaced veins, with veins transversely connected at apex, glabrous, obtuse. Fertile lemma elliptic, 1.6–1.8 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5 mm long, yellow. Stigmas purple.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuaasia. New Guinea PNG. New Guinea.

Digitaria perrieri A. Camus. *Bull. Soc. Bot. France* 72: 153 (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: Madagascar centr.: Massif de l'Andringitra, endroits tourbeux, vers 2000 m, fivr. 1922, *Perrier de la Bathie 14543* (HT: P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (546).

Derivation (Clifford & Bostock 2007): In honor of Joseph Marie Henri Alfred Perrier de la Bathie (1872–1958) French botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms prostrate, weak, 3–5 cm long. Leaf-sheaths striately veined, pilose. Ligule an eciliate membrane. Leaf-blades 0.3–0.7 cm long, 0.5–1 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 0.8–1.2 cm long, bearing few fertile spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.8–0.9 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, compressed slightly, 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, 1.9–2 mm long, 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 oblong, 1 length of spikelet, membranous, 5 -veined, glabrous, acute. Fertile lemma elliptic, 1.8 mm long, cartilaginous, much thinner on margins, pallid or yellow, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Digitaria perrottetii (Kunth) Stapf. *Prain, Fl. Trop. Afr.* 9: 435 (1919).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Senegal. **Basionym or Replaced Name:** *Panicum perrottetii* Kunth, *Revis. Gramin.* 395, t. 111 (1831)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Crescit in Senegalia, prope Walo,.

Recent Synonyms: *Digitaria floribunda* Goetghebeur, *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 415 (1975) (1975).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):177, t. 46), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (375, Fig 140), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (547).

Derivation (Clifford & Bostock 2007): in honor of Georges Samuel Perrottet (1793–1870) Swiss botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 30–200 cm long, without nodal roots or rooting from lower nodes. Ligule an eciliate membrane. Leaf-blade base simple or broadly rounded or amplexicaul. Leaf-blades curled, 3–35 cm long, 3–20 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, in several whorls, spreading, unilateral, 2–11 cm long. Central inflorescence axis 8–30 cm long. Rhachis wingless, angular, with scattered hairs. 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, dorsally compressed, 1.2–2.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.75–1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous or 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, 5–7 -veined, puberulous or pubescent, acute. Fertile lemma elliptic, 1.2–2.3 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Senegal. Burundi, DRC. Kenya, Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, Kwazulu-Natal. Madagascar.

Digitaria petelotii Henrard. *Blumea*, 1: 109 (1934).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Cambodia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: A. *Petelot* 263, Jul 1921, Cambodia: Compong Chuang (P; IT: L).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (554).

Derivation (Clifford & Bostock 2007): in honor of Paul Alfred Pitelot (1885-) French entomologist and plant collector in Indo-China.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Stolons present. Culms decumbent, 30–70 cm long. Culm-internodes distally pubescent. Culm-nodes pubescent. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane. Leaf-blades erect or ascending, linear or lanceolate.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 2–5, paired or digitate, unilateral, 10 cm long. Rhachis broadly winged, scabrous on margins. Raceme-bases brief, pubescent. Spikelets in threes. Fertile spikelets sessile and pedicelled, 3 in the cluster, 1 sessile. Pedicels present, unequal, 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 elliptic, dorsally compressed, 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 surface pubescent, hairy between veins, with verruculose hairs. 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, hairy between veins, with verruculose hairs, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, yellow. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Cambodia, Thailand.

Digitaria phaeothrix (Trin.) Parodi. *Physis*, 9: 19 (1928).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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 phaeothrix* Trin., *Sp. Gram.* 1(8): , t. 91 (1827)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *F. Sellow s.n.*, no date, Uruguay: Montevideo (BAA (fragm.), US-80909 (fragm.)).

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (883, Fig. 180 as *adusta*, *phaeothrix*), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (360, Fig. 150 & 357, Fig. 149 as *D. saltensis*, *D. adusta*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (476, Fig. 123 var. *adusta*), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (119, Fig. 33 as var. *adusta*), B.Rosengurtt, *Gramineas Uruguayas I* (1970) (301, Fig. 126 & 302, Fig. 127 as *D. arechavaletae*, *D. saltensis*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (12, 14, 387 & 389 as *D. adusta*, *D. adusta* var. *hackeli*, *D. leianthana* var. *leucotricha*, *D. saltensis*).

Illustrations (Journals): *Darwiniana* (19: 112, Fig. 11 as var. *adusta* and 114, Fig. 12 as var. *hackelii* (1974)).

Derivation (Clifford & Bostock 2007): Gk. phaeos, grey; thrix, hair. Spikelets invested with grey hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 70–200 cm long, 3–4 - noded. Culm-nodes glabrous. Leaf-sheaths 16–47 cm long, outer margin hairy. Ligule an eciliate membrane, 1 mm long. Leaf-blades involute, 20–30 cm long, 1–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–15, digitate or borne along a central axis, unilateral, 5–40 cm long. Central inflorescence axis 1–10 cm long. Rhachis angular, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 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, 3–4 mm long, with hairs extending 0.1 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 2.5 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume hairs tawny. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, prominently veined, pubescent, hairy between veins but central interspaces glabrous, bearing tawny hairs, acute. Fertile lemma lanceolate, 3–4 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ovoid, 2 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Colombia. Brazil South. Argentina Northeast, Uruguay.

TDWG4. Mato Grosso, Goias, Sao Paulo Parana, Catarina, Rio Grande do Sul. Buenos Aires, Chaco, Corrientes, Entre Rios, Formosa, Santa Fe.

Digitaria phaeotricha (Chiov.) Robyns. *Mem. Inst. Roy. Col. Belge*, 4 to, *Sect. Sc. Nat. Med.*, 1 Fasc. 1:28 (1931).

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:** *Digitaria parlatorei* var. *phaeotricha* Chiov., *Ann. Bot. (Rome)* 13: 41 (1914)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Bovone 100*, Sep 1912, Zaire: Katanaga: Plateau Bianos pianura (herb. generale Turin).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (as var *phaeothrix* & *adusta*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (555).

Derivation (Clifford & Bostock 2007): as for *phaeothrix*. The glumes and sterile lemmas are invested with copious grey hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 60–120 cm long. Culm-internodes distally glabrous. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliolate membrane, 1 mm long. Leaf-blades flat or involute, 10–20 cm long, 3–7 mm wide. Leaf-blade surface scaberulous or papillose, rough adaxially, pubescent, densely hairy, hairy abaxially. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes (5–)10–20, borne along a central axis, appressed, unilateral, 1–3 cm long. Central inflorescence axis 1–8 cm long. Rhachis wingless, angular, 0.3 mm wide, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 1–8 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, 3.5–4.3 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.66 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface pilose. Upper glume hairs red. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pilose, bearing red hairs, acute. Fertile lemma oblong, 3.5–4.3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, South tropical Africa. Sierra Leone. DRC. Angola, Zambia.

Digitaria philippinensis Henrard. *Monogr. Gen. Digitaria*, 563 (1950).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *M. Ramos 42890*, Aug-Oct 1923, Philippines: Bohol I., Bohol Prov. (W; IT: L, P, SING, US-1259291).

HT: *Ramos BS 42890*, (W; IT: L, P, SING).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (564).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From the Philippines.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 30–70 cm long. Ligule an eciliate membrane, 2 mm long, erose, truncate. Leaf-blades 5.5–14 cm long, 4–5 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Peduncle pilose above. Racemes 3–4, digitate, unilateral, 7.5–10 cm long. Central inflorescence axis 0–0.5 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, tip discoid or 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, dorsally compressed, acuminate, 1.85–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.35–1.5 mm long, 0.7–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins transversely connected at apex. Upper glume surface pubescent. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1.6–1.8 mm long, 0.85–0.9 length of spikelet, membranous, 7 -veined, with equidistant veins, with veins transversely connected at apex, pubescent, acute. Fertile lemma elliptic, 1.8–2 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.6 mm long, purple.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Malesia. Philippines.

Digitaria pinetorum Hitchcock. *U. S. Dept. Agric., Misc. Publ. No. 243* : 176 (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 12175*, 10 Nov 1920, Cuba: Isla de Pinos in pinelands, Los Indios, towards La Siguania (US-1387398 (photo, L); ILT: L (ffragm. ex US)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (567).

Derivation (Clifford & Bostock 2007): L. of the pines. Growing in pine woods.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 30–80 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades flat or involute, 1–2 mm wide. Leaf-blade surface glabrous or puberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 4–10 cm long. Rhachis angular, 0.3 mm wide. Spikelets appressed, in pairs or in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 2 mm long (longest pedicel).

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, 2–2.2 mm long, with hairs extending 0.2 mm beyond apex, 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 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, 2–2.2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean. Cuba.

Digitaria pittieri (Hackel) Henrard. *Blumea*, 1: 99 (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 Costa Rica. **Basionym or Replaced Name:** *Panicum pittieri* Hack., *Oesterr. Bot. Z.* 51: 367 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Tonduz 6945*, 31 Jul 1892, Costa Rica: San Josi: borde del Rmo Tiliri, 800 m, 9:55'N, 84:17'W (W; IT: CR-6945, NY-274246, US-823665). US spec. cites H. Pittier & Th. Durand as collectors.

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (191, Fig 63), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 148, Fig. 16 (2006)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (572).

Derivation (Clifford & Bostock 2007): in honor of Henry Frangois de Fabrega Pittier (1857–1950) Swiss botanist and civil engineer.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent or rambling, 40–80 cm long, 1 mm diam., rooting from lower nodes. Leaf-sheaths loose, hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1–2.5 mm long. Leaf-blades 6–10 cm long, 7–11 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, digitate, unilateral, 5–8 cm long. Central inflorescence axis 1–4 cm long. Rhachis angular, with scattered hairs. Rhachis hairs 3–4 mm long. Spikelets appressed, in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 0.2–0.3 mm long or 1.5–3 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 lanceolate, dorsally compressed, 3–3.7 mm long, with hairs extending 0.5–1 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 2–2.7 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume hairs purple. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, pubescent, ciliate on margins, acute. Fertile lemma lanceolate, 2.8–3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1 mm long, brown.

Distribution (TDWG). Continent. South America.

Country /Province /State. Mesoamerica. Costa Rica, Nicaragua.

Digitaria planiculmis Henrard. *Blumea*, 1: 112 (1934).

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, Bombetoke: Perrier 11049 (P holo).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Cataphylls evident. Basal innovations extravaginal. Culms erect, 40–80 cm long, 7–10 -noded, swollen at the base. Culm-internodes elliptical in section. Culm-nodes glabrous. Leaf-sheaths mostly shorter than adjacent culm internode. Leaf-sheath auricles erect. Ligule an eciliate membrane. Leaf-blade base cordate. Leaf-blades 4–7 cm long, 2.75–4 mm wide. Leaf-blade margins cartilaginous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle glabrous. Racemes 3–4, digitate, unilateral, 5–10 cm long. Rhachis scaberulous on margins. Raceme-bases glabrous. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. 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 elliptic, dorsally compressed, compressed slightly, 2.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5 mm long, 0.2 length of spikelet, membranous, without keels. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 1.2 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface puberulous. Upper glume margins eciliate or ciliolate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, with unevenly spaced veins, puberulous, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Digitaria platycarpa (Trin.) Stapf. *Kew Bull.* 1906, 78 (1906).

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).

Basionym or Replaced Name: *Panicum platycarpum* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 3,1(2–3): 198 (1834)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: V. spp. Inss. Bonin, islands south of Japan.

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (441 as *D. matsumurae*).

Derivation (Clifford & Bostock 2007): Gk. platys, flat; karphe, straw. The rhachis is broad with flat spikelets attached to one side.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 15–25 cm long. Ligule an eciliate membrane. Leaf-blades 2–4 cm long, 2–3.5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 4 cm long. Rhachis narrowly winged, angular, 1 mm wide. 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, 3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.15 length of spikelet, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume surface glabrous. Upper glume margins ciliate. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, smooth, puberulous, ciliate on margins, truncate or obtuse. Fertile lemma elliptic, 3 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Eastern Asia. Ogosawara-shoto.

Digitaria poggeana Mez. *Engl. Jahrb.* 57: 191 (1921).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Pogge* 5, Zaire (B).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Karl Pogge (fl. 1882–1907) who collected in Zaire and S.W. Africa.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 50–150 cm long. Ligule an eciliate membrane. Leaf-blades 4–25 cm long, 4–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 40–100, borne along a central axis, simply spaced or closely spaced, flexuous, unilateral, 3–10 cm long. Central inflorescence axis 15–35 cm long. Rhachis wingless, angular. Raceme-bases filiform, 10–50 mm 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, dorsally compressed, 1.7–2.7 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, spurred (0.1–0.3mm), 0.5–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface glabrous. 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, 5 -veined, glabrous, with a transverse fringe of hair, ciliate on margins (purple hairs), acute. Fertile lemma elliptic, 1.7–2.7 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. DRC. Tanzania. Zambia.

Digitaria polybotrya Stapf. Prain, *Fl. Trop. Afr.* 9: 462 (1919).

Regarded by K as a synonym (*D. leptorhachis*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *Vanderyst* 3890, Belgian Congo: Standley Pool Distr.: Mokaba

LT: *Vanderyst* 3919, Belgian Congo: Muschie (K). LT designated (as type) by Henrard, *Monogr. Digitaria* 581, 582 (1950).

ST: *Buettner s.n.*, Belgian Congo: islands in Stanley Pool

ST: *Vanderyst* 2617 (*pro parte*), Belgian Congo: Kwango Distr.: sandbanks in the Kwilu River

ST: *Vanderyst* 3807 (*pro parte*), Belgian Congo: between Lutschima and Katschaka.

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 (39, Pl. 20), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (581).

Derivation (Clifford & Bostock 2007): Gk. polys, many; botrys, bunch. The panicle bears many racemes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual or perennial, short-lived. Culms decumbent, 60–150 cm long, 2–4 mm diam., wiry, rooting from lower nodes. Culm-nodes glabrous (rarely) or bearded. Lateral branches lacking or sparse. Ligule an eciliate membrane. Leaf-blades 5–20 cm long, 2–6 mm wide. Leaf-blade surface glabrous (rarely) or pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 16–40, digitate or borne along a central axis, unilateral, 10–20 cm long. Central inflorescence axis 2–10 cm long. Rhachis wingless, angular, glabrous on surface or with scattered hairs. Raceme-bases brief or filiform. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal.

Sterile Spikelets. Basal sterile spikelets absent or rudimentary.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 1.4–2 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 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, 7 -veined, pubescent, hairy between veins, acute. Fertile lemma elliptic, 1.4–2 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (2 refs TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Digitaria polybotryoides Robyns & Van der Veken. *Bull. Jard. Bot. Brux.* 22: 152 (1952).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zaire: Homble 110 (BR holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *-oides*, resembling; *polys*, many; *botrys*, bunch of grapes. The panicle bears many racemes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 50–60 cm long, 3–5 -noded. Leaf-sheaths 3–14 cm long, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1.5 mm long. Leaf-blades 4–11 cm long, 3 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–8, digitate, unilateral, 4–9 cm long. Central inflorescence axis 2–4 cm long. Rhachis angular, scaberulous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, terete, unequal, 1–5 mm long, scaberulous, 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 obovate, dorsally compressed, gibbous, 1.3–1.5 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume obovate, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret obovate, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, acute. Fertile lemma elliptic, 1.2–1.4 mm long, cartilaginous, much thinner on margins, light brown, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Digitaria polyphylla Henrard. *Blumea*, 1: 97 (1934).

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:** *Digitaria foliosa* Stent, *Bothalia* 3(1): 154 (1930). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Cape Province: Kuruman, Vuilnek, *Pentz N.H.P.* 8527.

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (584).

Derivation (Clifford & Bostock 2007): Gk. polys, several; phyllon, leaf. Culms many-leaved in comparison with related species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms 20–40 cm long. Culm-nodes brown, glabrous. Leaf-sheaths smooth, glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades 4–10 cm long, 2–4 mm wide. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, erect, unilateral, 2–8 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.5 mm wide, smooth on surface, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–2 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, 2.1–2.5 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume ovate, 0.6–0.7 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 oblong, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, pubescent, acute. Fertile lemma oblong, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa, Southern Africa. Mozambique. North-West, Northern Cape.

Digitaria porrecta S. T. Blake. *Proc. Roy. Soc. Queensl.*, 84: 63 (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>: *vide* TROPICOS and Kew Synonymy Database: HT: *Blake 23590*, 12 Apr 1970, Australia: Queensland: Darling Downs, Cambooya, -27.5 S Lat, 151.45 E Long., 430 m (BRI; IT: CANB, L).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (220), J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983), 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. stretched outwards and forwards. Inflorescence of stiffly spreading pedunculate racemes bare of spikelets for a considerable distance from the base.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes elongated. Culms erect, 40–70 cm long, 4–7 -noded. Culm-nodes glabrous. Leaf-sheaths without keel, smooth or antrorsely scabrous, glabrous on surface, outer margin glabrous. Leaf-sheath auricles erect. Ligule an eciliate membrane, 2.2–3 mm long, erose, obtuse. Leaf-blades 6–15 cm long, 2.8–4 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, digitate, spreading, unilateral, 12–27 cm long, bearing 10–20 fertile spikelets on each, secondarily branched. Central inflorescence axis 0.5–2 cm long. Rhachis angular, smooth on margins. Spikelet packing lax. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, 1–2 mm long, scabrous, glabrous, 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, dorsally compressed, 5.2–6.9 mm long, 0.9–1 mm wide, falling entire. Rhachilla internodes elongated between glumes.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblong, 1.1–1.6 mm long, 0.2 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume lanceolate or elliptic, 4.6–6.5 mm long, 0.8–0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent. Upper glume margins eciliate or ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or elliptic, 4.5–6.1 mm long, 1 length of spikelet, membranous, 7 -veined, without cross-veins, pilose, hairy between veins or between veins but central interspaces glabrous, acute or acuminate. Fertile lemma elliptic, 4.5–5.5 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acute or acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. South East, Inland. Western Slopes.

Digitaria procurrens Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 409 (1975).

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, Muzombwe: Phipps & Vesey-FitzGerald 3212 (BR holo, Bm, K, SRGH).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10.

Derivation (Clifford & Bostock 2007): *L. procurro*, project. The inflorescence projects beyond the leaf-sheath.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms geniculately ascending, 20–30 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades lanceolate, 2–3 cm long, 4–7 mm wide. Leaf-blade surface glabrous. Leaf-blade margins crenate, scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, spreading or erect, unilateral, 6–22 cm long. Rhachis broadly winged, 0.3–0.5 mm wide. Raceme-bases filiform. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, angular, unequal, 0.5–3.5 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 oblong, dorsally compressed, gibbous, 2.9–3 mm long, with hairs extending 0.2–0.5 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.66–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume hairs white or purple. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5 -veined, pubescent, bearing white hairs or purple hairs, acute. Fertile lemma oblong, gibbous, 3 mm long, cartilaginous, much thinner on margins, yellow, keeled. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Digitaria psammophila Henrard. *Blumea*, 1: 112 (1934).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Madagascar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Raymond Decary 8488*, 3 Feb 1931, Madagascar: Ambovombe (P; IT: L).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (599).

Derivation (Clifford & Bostock 2007): *Gk. psammos*, sand; *phileo*, love. Dune species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Basal innovations extravaginal. Culms geniculately ascending, 15–30 cm long, 5–6 -noded. Culm-nodes glabrous. Leaf-sheaths glabrous on surface or hirsute. Ligule an eciliate membrane, 2 mm long. Leaf-blades 1–3 cm long, 2 mm wide. Leaf-blade surface glabrous or pubescent, sparsely hairy, hairy adaxially.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, paired or digitate, unilateral, 3.5–5 cm long. Rhachis narrowly winged, angular. Spikelets appressed, in pairs. Fertile spikelets sessile and pedicelled. Pedicels present, angular, 0.5 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, 2.5–2.8 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5–7 -veined, ribbed, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma lanceolate, 2.5–2.8 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Digitaria pseudodiagonalis Chiov. *Nuov. Giorn. Bot. Ital. n. s.* 26: 63 [Jan.] (1919).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. **Basionym or Replaced Name:** *Digitaria minutiflora* Stapf, Prain, *Fl. Trop. Afr.* 4: 476 [June] (1919). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Bovone 92*, Zaire (TO).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (375, Fig 140 as *D. minutiflora*), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (209 & 461 as *D. eglumis. minutiflora*).

Derivation (Clifford & Bostock 2007): Gk. pseudos, false. Resembling *Digitaria diagonalis*..

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 15–60 cm long. Ligule an eciliate membrane. Leaf-blades 5–30 cm long, 2–7 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–30, borne along a central axis, erect or ascending, unilateral, 2–12 cm long. Central inflorescence axis 1–12 cm long. Rhachis angular. Spikelets in pairs or clustered at each node. Fertile spikelets pedicelled, 2–6 in the cluster. Pedicels present, setose, 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, 0.8–1.2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblate, 0.1 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume apex truncate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 3(–5) -veined, glabrous, obtuse. Fertile lemma elliptic, 0.8–1.2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Western Indian ocean. Guinea, Sierre Leone. Cameroon, DRC. Ethiopia (inc. Eritrea). Tanzania, Uganda. Malawi, Zambia, Zimbabwe. Madagascar.

Digitaria pubiflora (Vasey) Wipff. *Sida* 19(4): 923 (2001).

Regarded by K as a synonym (*D. cognata*).

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, Texas. **Basionym or Replaced Name:** *Panicum autumnale* var. *pubiflorum* Vasey, *Dept. Agric. Bot. Div. Bull.* 8: 35 (1889)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Not a type, but annotated by L.H. Dewey as the type: *V. Havard s.n.*, 1882, USA: Texas: Maverick Co. (US-928185). For discussion of type see Wipff & Hatch, *Syst. Bot.* 19: 624 (1994).

LT: *G.R. Vasey s.n.*, 1881, USA: Texas: El Paso Co.: Mts. near Paso del Norte [El Paso] (US-928188; ILT: US-744304). LT designated by Wipff & Hatch, *Syst. Bot.* 19(4): 625 (1994).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (363 & 587).

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: Paniceae. Subtribe ANTHEPHORINAE.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA, South-central USA, Mexico. Arizona. New Mexico, Texas. Northeast Mexico.
Coahuila, Neuvo Leon.

Digitaria pulchra Van der Veken. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 400 (1975).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Zaire, Kundelungu: Coget 209 (BR holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): L. beautiful. Attractive in appearance, usually the inflorescence.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths elongated. Butt sheaths pilose, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 30–70 cm long. Culm-nodes brown, pubescent. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–0.7 mm long. Leaf-blades flat or involute, 2–6 cm long, 1–3 mm wide. Leaf-blade margins scaberulous, glabrous or tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes (3–)6–16, borne along a central axis, erect or appressed, unilateral, 4–8 cm long. Rhachis wingless, angular, 0.2–0.3 mm wide. Raceme-bases filiform. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, terete or angular, unequal, 0.5–3.5 mm long, smooth, puberulous, 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, 2.2–2.6 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex emarginate or truncate. Upper glume oblong, 0.75–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume hairs white or dark brown. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5(–7) -veined, pubescent or setose, bearing white hairs or dark brown hairs, acute. Fertile lemma oblong, 2.2–2.6 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. Burundi, DRC. Zambia.

Digitaria purpurea Swallen. *Contrib. U. S. Nat. Herb.* 29: 265 (1948).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Brazil. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *P. Dusin 15670*, 10 Oct 1914, Brazil: Parana: in campo, Turma no. 23 (US-1912779; IT: L (fragm.), MVFA, SI).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (834).

Derivation (Clifford & Bostock 2007): L. purple to reddish. Usually of purple spikelets.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pilose, persistent and investing base of culm, with compacted dead sheaths. Culms erect, 40–80 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades filiform or linear, involute, 7–13 cm long, 0.5–3 mm wide. Leaf-blade surface pilose. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–5, single or paired or digitate, flexuous, unilateral, 3.5–7 cm long, simple or secondarily branched. Rhachis angular, smooth on margins. Spikelet packing lax. 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 ovate, dorsally compressed, 3–4 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 2–3 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume hairs black. 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 -veined, pubescent, hairy between veins but central interspaces glabrous, bearing black hairs, acute. Fertile lemma ovate, 3–4 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 2.5 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG), Continent. South America.

Country /Province /State. Brazil. Brazil South.

Digitaria pusilla Ridley. *Fl. Mal. Penins.* 5: 215 (1925).

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 Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Ridley 14866*, Malay Peninsula: sandy heaths, Setul (K; IT: BM, SING). LT designated (as type) by Henrard, *Monogr. Digitaria* 609 (1950).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (609).

Derivation (Clifford & Bostock 2007): L. very small. Plants of small stature.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 7–15 cm long. Lateral branches ample. Leaf-sheaths 0.5–1 cm long, pubescent. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 1–2.5 cm long, 1–2 mm wide. Leaf-blade surface pubescent.

Inflorescence. Inflorescence composed of racemes. Racemes 2(–3), paired, unilateral, 1.5–3 cm long. Rhachis flattened. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, 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, dorsally compressed, 1 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 pubescent, hairy between veins, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, with verruculose hairs, acute. Fertile lemma elliptic, 1 mm long, cartilaginous, much thinner on margins, purple, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG), Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Thailand. Malaya.

Digitaria quinhonensis A. Camus. *Bull. Mus. Hist. Nat. Paris*, 27: 456 (1921).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Vietnam. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B. Balansa s.n.*, 27 Oct 1886, Viet Nam: Annam: Quinhon (P; IT: L).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (614).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Qui-nhon, Annam.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 60–80 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule an eciliate membrane, 2–3 mm long, brown. Leaf-blades linear or lanceolate, 8–14 cm long, 6–8 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 10 secondary veins. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins cartilaginous, undulate, scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–9, digitate, unilateral, 10–12 cm long. Central inflorescence axis 3–4 cm long, glabrous. Rhachis angular, 0.3 mm wide. Spikelet packing lax. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.5 mm long or 3 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, acuminate, 3–3.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3 mm long, 0.1 length of spikelet, membranous. Lower glume apex acute. Upper glume lanceolate, 1.3–1.5 mm long, 0.33 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 lanceolate, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, pubescent, acuminate. Fertile lemma lanceolate, 3–3.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Vietnam.

Digitaria radicata (Miq.) Miq. *Fl. Ind. Bat.* 3: 437 (1857).

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 *D. timorensis*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Philippine Islands. **Basionym or Replaced Name:** *Panicum radicosum* J. Presl, *Reliq. Haenk.* 1(4–5): 297 (1830). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Philippine Islands: Luzon: Sorsogon Prov., *T. Haenke s.n.* (HT: P; IT: US-80950 (fragm.)).

Recent Synonyms: *Digitaria timorensis* (Kunth) Balansa, *Morot, Journ. de Bot.* 4: 138 (1890).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (381, Fig 143 as *D. timorensis*), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (524), C-C Hsu, *Taiwan Grasses* (1975), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (as *D. formosana*, *D. timorensis*), H.J.Noltie, *The Grasses of Bhutan* (2000) (729, Fig. 44), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 752), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (57, Fig. 48), H.B.Gilliland, *Grasses of Malaya* (1971) (99, Fig 41 as *D. timorensis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 759), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:48(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);.

Derivation (Clifford & Bostock 2007): L. radix, root; -osa, abundance. Plant with well developed roots or rhizomes.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms rambling, slender, 20–40 cm long. Ligule an eciliate membrane. Leaf-blades lanceolate, 2–7 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, unilateral, 3–9 cm long. Rhachis narrowly winged, angular, smooth on margins. Spikelet packing 0.5 their length apart. 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 rachilla extension. Spikelets 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 two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.2 mm long, 0.05–0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.33–0.5 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, 5(–7) -veined, with unevenly spaced veins (laterals contiguous), pubescent, eciliate on margins or ciliate on margins, acute. Fertile lemma lanceolate, 2.5–3 mm long, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia, Pacific.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, Western Indian ocean. Cameroon. Tanzania. Mauritius (*), Madagascar, Rodrigues, Seychelles. China, Eastern Asia. China South Central, Hainan, China Southeast. Japan, Kazan-retto, Nansei-Shoto, Ogasawara-shoto, Taiwan. Indian Subcontinent, Indo-China, Malesia, Papuasia. Assam, Eastern Himalaya, India, Nepal, Pakistan (*). Myanmar, Thailand, Vietnam. Java, Lesser Sunda Is, Malaya, Singapore, Philippines, Christmas I. New Guinea. Australia. Queensland. Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific. Fiji, Gilbert Is, Nauru, New Caledonia, Samoa, Tonga, Vanuatu. Cook Is, Marquesas, Society Is. Caroline Is, Marcus Is, Marianas, Marshall Is, Wake Is. Hawaii (*).

TDWG4. Anhui, Fujian, Guangdong, Zhejiang. Yunnan. Darjeeling, Bhutan. Kerala. North.

Digitaria ramularis (Trin.) Henrard. *Blumea*, 1: 101 (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), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Australia. **Basionym or Replaced Name:** *Panicum ramulare* Trin., *Gram. Panic.* 244 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Lindley s.n.*, Nov.Holl[andia]: ad portum GacksJon (LE-TRIN-0919.01).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (220), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(21)), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (619 & 736 as *D. tenuissima*).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. ramulus*, small branch; -are, pertaining to. Inflorescence much branched.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely. Butt sheaths villous. Culms geniculately ascending, 30–70 cm long, 3-noded. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths keeled, hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 2–4 mm long, truncate or obtuse. Leaf-blades 5–25 cm long, 2–5 mm wide. Leaf-blade midrib evident. Leaf-blade surface pubescent. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–10, borne along a central axis, spreading, flexuous, unilateral, 3–13 cm long. Central inflorescence axis 3–10 cm long. Rhachis angular, puberulous on surface. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 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 oblong, dorsally compressed, 1.5–2 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.15 length of spikelet, membranous. Lower glume apex obtuse or acute. Upper glume elliptic, 0.5–0.75 length of spikelet, membranous, without keels, 3-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 elliptic, 0.9–1 length of spikelet, membranous, 7-veined, glabrous, acute. Fertile lemma elliptic, 1.5–2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). **Continent.** Europe (*), Tropical Asia, Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Papuasias.** New Guinea PNG. New Guinea. **Australia.** Queensland, New South Wales.

TDWG4. North, Central, South East, Inland. Coast, Tablelands, Western Slopes.

Digitaria redheadii (C.E. Hubbard) Clayton. *Kew Bull.*, 29 (3): 523 (1974).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Zimbabwe. **Basionym or Replaced Name:** *Digitariopsis redheadii* C.E. Hubb., *Hooker's Icon. Pl.* 35: t. 3420 (1940)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *E.W.B. Milne-Redhead 4591*, 16 Feb 1938, Zimbabwe (US-1869402).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (235, Fig 160 as *Digitariopsis*), G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (as *Digitariopsis*).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3420 (1940) as *Digitariopsis*).

Derivation (Clifford & Bostock 2007): in honor of Edgar Wolston Bertram Handsley Milne-Redhead (1906-) English botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect, 10–60 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5–3 mm long, erose, truncate. Leaf-blades flat or involute, 1–7 cm long, 1–4 mm wide, dark green or purple. Leaf-blade surface glabrous. Leaf-blade margins smooth.

Inflorescence. Inflorescence composed of racemes. Racemes 15–30, borne along a central axis, spreading or erect, unilateral, 1–4 cm long. Rhachis narrowly winged, angular, 0.2–0.4 mm wide. Raceme-bases filiform. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, angular, 1–1.5 mm long, 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 oblong, dorsally compressed, 2.3–2.6 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, spurred, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent. Upper glume hairs white or purple. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 5 -veined, pubescent, bearing white hairs or purple hairs, acute. Fertile lemma oblong, 2–2.3 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. DRC. Angola.

Digitaria remotigluma (De Winter) Clayton. *Kew Bull.*, 29 (3): 520 (1974).

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:** *Digitariella remotigluma* De Winter, *Bothalia* 7: 467 (1961)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *De Winter* 3798, Namibia: Tondoro to Lupala (PRE; IT: K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): L. remotus, distant; gluma, husk.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 10–60 cm long. Ligule an eciliate membrane. Leaf-blades 2–16 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, paired or digitate, unilateral, 2–11 cm long. Rhachis wingless, angular. 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 lanceolate, dorsally compressed, 6–14 mm long, falling entire. Rhachilla internodes elongated between glumes. Rhachilla elongation 0.7–2 mm long.

Glumes. Glumes two, dissimilar, exceeding apex of florets, thinner than fertile lemma. Lower glume oblate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 1 length of spikelet, membranous, without keels, 7 -veined. Upper glume surface glabrous. Upper glume apex setaceously acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3–4.5 mm long, 0.33–0.5 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, with hooked hairs (curled tips), acute. Fertile lemma elliptic, 5–10 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. DRC. Tanzania. Malawi, Zambia, Zimbabwe. Namibia, Botswana.

Digitaria rivae (Chiov.) Stapf. *Kew Bull.* 1907, 213 (1907).

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 rivae* Chiov., *Annuario Reale Ist. Bot. Roma* 7: 62, t. 3, f. 2 (1897)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Somali: deserto di Ogaden, III tapa, 28 Dec 1892, *D. Riva* 303 (150).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (628 & 85 as *D. botryostachya*).

Derivation (Clifford & Bostock 2007): in honor of Domenico Riva (- 1895) Italian physician who collected in Somalia.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short, knotty. Butt sheaths pubescent or woolly. Culms 30–100 cm long, firm (hard). Culm-nodes glabrous or bearded (rarely). Ligule an eciliate membrane. Leaf-blades 4–30 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 6–40, borne along a central axis, simply spaced or the lowest whorled, spreading or appressed, unilateral, 1–11 cm long. Central inflorescence axis 4–30 cm long (glabrous). Rhachis wingless, angular. 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 ovate, dorsally compressed, 1.7–2.5 mm long, with hairs extending 0.5 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.6 mm long, 0.05–0.25 length of spikelet, membranous, without keels. Lower glume apex obtuse. Upper glume ovate, 0.66–0.8 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface pubescent 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, pilose or villous, acute. Fertile lemma elliptic, 1.7–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Ethiopia (inc. Eritrea), Socotra, Somalia. Kenya, Tanzania.

Digitaria rukwae Clayton. *Kew Bull.*, 29(3): 520 (1974).

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>: *vide* TROPICOS and Kew Synonymy Database: Tanzania: Chunya Dist.: Rukwa, Tumba, flood plain grassland, 12 Feb 1955, *Siame* 502 (HT: K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40).

Derivation (Clifford & Bostock 2007): From Rukwa, Tanzania.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Butt sheaths glabrous or pubescent. Culms 25–120 cm long, spongy. Culm-nodes glabrous. Ligule an eciliate membrane. Leaf-blades 5–30 cm long, 2–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 6–25, borne along a central axis, simply spaced or in several whorls, unilateral, 4–10 cm long. Central inflorescence axis 4–20 cm long. Rhachis wingless, angular. 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, dorsally compressed, 2–2.6 mm long, with hairs extending 0 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.5 mm long, 0.05–0.2 length of spikelet, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 0.75–1 length of spikelet, membranous, without keels, 3(–5) -veined. Upper glume surface pubescent 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, 7 -veined, pubescent or pilose, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Tanzania. Mozambique, Zambia. Kwazulu-Natal.

Digitaria runyonii Hitchcock. *Journ. Wash. Acad. Sc.* 23: 455 (1933).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Runyon 188*, 21 Apr. 1929, USA: Texas: on sand flats near the coast at the mouth of the Rio Grande, near Brownsville (US-1468080).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (639).

Derivation (Clifford & Bostock 2007): in honor of Robert Runyon (1881–1968) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Stolons present. Butt sheaths pubescent. Culms decumbent, 40–80 cm long, rooting from lower nodes. Leaf-sheaths glabrous on surface or pubescent. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 5–10 cm long, 4–7 mm wide. Leaf-blade surface glabrous to hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, digitate, unilateral, 7–12 cm long. Central inflorescence axis 1–4 cm long. Rhachis angular, scabrous on margins. Spikelet packing lax. 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 oblong, dorsally compressed, acute, 2.8–3.5 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 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, 7 -veined, villous, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 2.8–3.5 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. $2n = 54$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA. Texas.

Digitaria sabulicola Henrard. *Blumea*, 1: 108 (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. St. Hilaire Catal. B2, 2Me Part No. 369*, no date, Brazil: Espirito Santo (P; IT: L, US-1645638).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (640).

Derivation (Clifford & Bostock 2007): *L. sabulum*, coarse sand; -cola, dweller. Growing in damp, sandy places.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 20–40 cm long, 5 -noded. Culm-nodes bearded. Leaf-sheaths hirsute. Ligule an eciliate membrane. Leaf-blades 5 cm long, 1 mm wide. Leaf-blade surface pubescent, densely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 3–6 cm long. Central inflorescence axis 1–2 cm long. Rhachis narrowly winged, with sharp-edged midrib, angular. Raceme-bases pubescent. 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 elliptic, dorsally compressed, acuminate, 2.25 mm long, 0.5 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, without keels, 3 -veined. Upper glume surface scabrous, rough on veins, pubescent, hairy between veins. Upper glume margins pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, puberulous, hairy between veins, pubescent on margins. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Digitaria sacchariflora (Raddi) Henrard. *Blumea* 1:99 (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:** *Trichachne sacchariflora* Nees, *Fl. Bras. Enum. Pl.* 2(1): 87 (1829)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Martius s.n.*, Brasilia: ad Sebastianopolis (B).

ST: *F. Sellow s.n.*, Brasilia: ad sebastianopolis (B).

ST: *Sieber s.n.*, Martinique.

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 120), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (355, Fig. 148), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (114, Fig. 31), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (643).

Derivation (Clifford & Bostock 2007): L. flos, flower. Inflorescence resembles that of *Saccharum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths thickened and forming a bulb, pubescent. Culms erect, 40–120 cm long. Ligule an eciliate membrane. Leaf-blades 10–30 cm long, 5–10 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, borne along a central axis, erect or ascending, unilateral, 4–10 cm long. Central inflorescence axis 10–30 cm long. Rhachis angular. 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 lanceolate, dorsally compressed, 4–5.5 mm long, with hairs extending 1–2 mm beyond apex, falling entire. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.5 mm long, 0.15 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume hairs white or yellow. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 4–5.5 mm long, 1 length of spikelet, membranous, 7 -veined, glabrous, ciliate on margins, acuminate. Fertile lemma lanceolate, 3.5–4.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. *N* = 18.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Bolivia, Colombia. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Catamarca, Jujuy, La Rioja, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, Formosa, Misiones, Santa Fe.

Digitaria sacculata Clayton. *Kew Bull.*, 29(3): 525 (1974).

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: Robinson 4352 (K holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40).

Derivation (Clifford & Bostock 2007): L. *saccus*, sac; *-ulus*, diminutive; *-ata*, possessing. The base of the upper glume is expanded into a small sac.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms erect, slender, 10–25 cm long. Culm-nodes brown, glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1 mm long. Leaf-blades linear or lanceolate, 2–5 cm long, 2–4 mm wide, purple (basal leaves). Leaf-blade surface smooth or scaberulous, glabrous. Leaf-blade margins crenate, scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–5 cm long. Rhachis wingless, angular, 0.2 mm wide, smooth on margins. Raceme-bases filiform. Spikelets solitary or in pairs. Fertile spikelets pedicelled, 1–2 in the cluster. Pedicels present, angular or flattened, unequal, 0.5–2.5 mm long, puberulous, hairy at tip, 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, 3–3.5 mm long, with hairs extending 0.5–1 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, spurred, 0.5 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 lanceolate, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma lanceolate, gibbous, 2.25–2.6 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Digitaria sanguinalis (L.) Scop. *Fl. Carn. ed. 2*, 1: 52 (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), 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) (& as *D. aegyptiaca*).

Basionym or Replaced Name: *Panicum sanguinale* L., *Sp. Pl.* 1: 57 (1753). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *Van Royen s.n. [Panicum 6]*, Cultivated at Leiden (L). see Hitchcock, 1908, *Cotnrb. U.S. Natl. Herb.* 12: 117; Henrard, 1950, *Digitaria Monograph* pp. 647–650, (Ill. of spikelet p. 649). ST: *H. U. "8 sanguinale"*, (LINN-80.31). H.U. is Hortus Upsalensis; this specimen was accepted as the type by Munro 1862, *Proc. Linn. Soc. Bot.* 6: 37, and by A.S. Hitchcock. *Contr. U.S. Natl. Herb.* 12: 117 (1908). ST: [*Clayton 451*], (LINN-80.32). Clayton 451 or "457" are not in the Clayton Herbarium at BM.

Illustrations (Books): C.E.Hubbard, *Grasses* (1968) (372), H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962), G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, T. 41), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (113, Fig. 66), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 411), L.Boulos, *Flora of Egypt* 4 (2005) (309, Pl. 91), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (477, Pl. 183), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (520), C-C Hsu, *Taiwan Grasses* (1975), H.J.Noltie, *The Grasses of Bhutan* (2000) (729, Fig. 44), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (443, Fig. 374), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (228, Pl. 67), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (607, Fig. 123), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (220), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(23)), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989), D.Sharp & B.K.Simon, *AusGrass. Grasses of Australia*. CD-Rom Version 1.0. (2002), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (381), F.W.Gould, *The Grasses of Texas* (1975) (409, Fig. 218), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (168, Fig. 106), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineas* (1981–1982) (883, Fig. 180), A.Burkat, *Flora Illustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (365, Fig. 152), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (482, Fig. 124), M.N.Correa, *Flora Patagonica* Parte III, *Gramineae* (1978) (Fl. Pat. 3: 517, Fig. 348 (1978)), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (129, Fig. 36), B.Rosengurt, *Gramineas Uruguayas I* (1970) (306, Fig. 129), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (18, 115, 298, 492, 577 & 662 as *D. aegyptiaca*, *D. caucasica*, *D. gracilis*, *D. nervosa*, *D. plebeja*, *D. sanguinalis* subsp. *pectiniformis*), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14e (1940) (51, Fig. 28), S-L Chen et al, *Flora of China*, *Illustrations, Poaceae* (2007) (Fig. 758), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:49(1980)).

Illustrations (Journals): *Darwiniana* (19: 151, Fig. 24 (1974)).

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. sanguineus*, dull-red; -alis, pertaining to. Foliage or inflorescence purplish.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent or prostrate, 10–30 cm long, 3–8 -noded, rooting from lower nodes. Culm-nodes glabrous or bearded. Leaf-sheaths pilose. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 3–10 cm long, 3–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–10, digitate, unilateral, 4–18 cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets appressed, 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 elliptic, dorsally compressed, acute, 2.5–3.3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.3–0.5 length of spikelet, membranous, 3 -veined. Upper glume surface pubescent, hairy between 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, 7 -veined, with equidistant veins, scabrous, rough on veins, puberulous, hairy between veins, acute. Fertile lemma elliptic, 2.5–3.3 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.6 mm long. Hilum elliptic.

$N = 18$ (3 refs TROPICOS), or 36 (1 ref TROPICOS). $2n = 36$ (6 refs TROPICOS), or 54 (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Africa, Temperate Asia, Tropical Asia, Australasia (*), North America, South America, Antarctica.

Region. Northern Europe, Southwestern Europe, Southeastern Europe, Eastern Europe, Middle Europe.

Country /Province /State. : Great Britain (*), Sweden. : Austria, Belgium, Czechoslovakia, Germany, Hungary, Netherlands, Poland, Switzerland. : Balears, Corsica, France, Portugal, Sardinia, Spain, Azores. : Albania, Bulgaria, Greece, Italy, Crete, Romania, Sicily, Yugoslavia. Belarus, Estonia, Latvia, Lithuania, Baltic States, Krym, Central European Russia, East European Russia, South European Russia, Northwest European Russia, Ukraine. **Northern Africa, Macaronesia, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa** (*). Algeria, Egypt, Libya, Morocco, Tunisia. Azores, Cape Verde, Madeira. Sudan. Tanzania. Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Free State, Kwazulu-Natal, Lesotho, Northern Cape, Western Cape, Eastern Cape. **Middle Asia, Caucasus, Western Asia, Arabian Peninsula, China, Eastern Asia.** Kazakhstan, Turkmenistan, Tadzhikistan, Uzbekistan. Iran, Iraq. China South Central, Inner Mongolia, Manchuria, China North-Central, China Southeast, Tibet, Xinjiang. Taiwan. **Indian Subcontinent, Malesia.** Eastern Himalaya, Pakistan, West Himalaya. Philippines. **Australia, New Zealand.** Western Australia (*), South Australia (*), Queensland (*), New South Wales (*), A.C.T. (*), Victoria (*), Tasmania (*), Lord Howe-Norfolk Is (*). New Zealand North I, New Zealand South I. **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, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, District of Columbia. Central Mexico, Northeast Mexico, Northwest Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Guatemala, Honduras, Panama. Aruba, Bermuda, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago, Venezuelan and Netherlands Antilles. Venezuela. Colombia. Brazil South. Argentina Northeast, Argentina South, Chile North, Chile Central, Chile South, Juan Fernandez Is, Paraguay, Uruguay. **Subantarctic islands.** Tristan de Cunha.

TDWG4. Gansu, Hebei, Shaanxi, Shandong, Shanxi. Anhui, Henan, Jiangsu. Guizhou, Hubei, Sichuan. Bhutan, Sikkim. Maharashtra, Punjab, Uttah Pradesh. Himachal Pradesh, Jammu Kashmir. South-West. Southern. South East, Inland. Coast, Tablelands, Western Slopes. Catamarca, 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. Neuquén, Río Negro. Atacama. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania. Los Lagos. Morelos. Aguascalientes, Chihuahua, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Baja California Sur, Sonora. Jalisco, Michoacan.

Digitaria schmitzii Van der Veken. *Bull. Jard. Bot. Brux.* 25: 325 (1955).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Zaire, Lubumbashi: Schmitz 4850 (BR holo, K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. in honor of Albert Schmitz (pre 1879) who collected in Mexico.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–50 cm long. Ligule an eciliate membrane. Leaf-blades 10–25 cm long, 1–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–6, paired or digitate, unilateral, 3–12 cm long. Rhachis broadly winged, with sharp-edged midrib. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic, dorsally compressed, 1.5–1.8 mm long, falling entire.

Glumes. Glumes both absent or obscure (or the upper a tiny cuff).

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5 -veined, pubescent, with clavate hairs, acute. Fertile lemma elliptic, 1.5–1.8 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa. DRC. Uganda.

Digitaria sejuncta (Hack. ex Pilg.) Henrard. *Meded. Herb. Leid. No.* 61, 5 (1930).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Brazil. **Basionym or Replaced Name:** *Panicum sejunctum* Hack. ex Pilg., *Bot. Jahrb. Syst.* 27(1–2): 19 (1899)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brasilia: Rio de Janeiro, *Stbel* 7.

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (671).

Derivation (Clifford & Bostock 2007): L. separated. Spikelets widely separated along inflorescence branches.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms 50–100 cm long, 4 -noded. Culm-nodes glabrous. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 20–30 cm long, 4–10 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 15–30, borne along a central axis, unilateral, 10–20 cm long. Central inflorescence axis 15–20 cm long. Rhachis angular. Spikelet packing distant. Raceme-bases brief or filiform, 0–50 mm long. 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 elliptic, dorsally compressed, 2.5 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.05 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume ovate, 0.66 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, 7 -veined, with unevenly spaced veins, pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil. Brazil Southeast.

Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe.

Digitaria sellowii (Mill. Hal.) Henrard. *Blumea*, 1: 99 (1934).

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:** *Trichachne sellowii* Mill. Hal., *Bot. Zeitung (Berlin)* 19(43): 315 (1861)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brasilia, ubi forsan in Montevideo, *Sellow s.n.* (HT: B).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (674).

Derivation (Clifford & Bostock 2007): in honor of Friedrich Sellow (1789–1831) German botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms erect, 60–150 cm long, 6–8 -noded. Culm-nodes brown, glabrous or pubescent. Leaf-sheaths 3–18 cm long, pilose, with tubercle-

based hairs. Ligule an eciliate membrane, 2–3 mm long, erose. Leaf-blades 3–19 cm long, 2–8 mm wide. Leaf-blade surface pubescent, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 5–8, borne along a central axis, unilateral, 2–5 cm long. Central inflorescence axis 10–20 cm long. Rhachis angular, scabrous on margins. 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, acute, 3.75–5 mm long, with hairs extending 3 mm beyond apex, falling entire. Rhachilla internodes elongated between glumes or elongated below basal sterile floret.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–0.75 mm long, 0.1 length of spikelet, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 2.75–4.25 mm long, 0.75 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7 -veined, glabrous, villous on margins, acuminate. Fertile lemma elliptic, 2.75–4 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–0.75 mm long. Caryopsis with adherent pericarp, ovoid, 1.5–1.9 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Mexico. Northeast Mexico, Southeast Mexico. **Mesoamerica, Western South America.** Colombia.

Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Chiapas, Quintana Roo, Yucatan.

Digitaria seriata Stapf. Prain, *Fl. Trop. Afr.* 9: 432 (1919).

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: Angola, Country of Ambuellas & Ganguellas: Gossweiler 3756 (K syn); Angola, Sungo-Kuito valley: Gossweiler 3761 (K syn).

Illustrations (Books): M.A.N.Muller, *Grasses of South West Africa/Namibia* (1984), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (678).

Derivation (Clifford & Bostock 2007): L. series, row; -ata, possessing. Culms arise in more or less close succession from extravaginal innovations.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose, clumped loosely or moderately or densely. Cataphylls evident. Rhizomes elongated, knotty. Stolons present. Butt sheaths thickened and forming a bulb, pubescent. Basal innovations extravaginal. Culms erect, 50–120 cm long, 4–6 -noded. Lateral branches lacking. Leaf-sheaths tight, mostly shorter than adjacent culm internode, striately veined, smooth, glabrous on surface. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 10–35 cm long, 3–9 mm wide. Leaf-blade venation with 6–8 secondary veins. Leaf-blade surface glabrous or puberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–12, digitate, erect or ascending, unilateral, 10–23 cm long. Central inflorescence axis 1–2 cm long. Rhachis angular, 0.25–0.5 mm wide, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, unequal, 0.5–2.5 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 or oblong, dorsally compressed, acute, 2.5–3.2 mm long, 1 mm wide, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2 mm long, 0.05–0.1 length of spikelet, membranous, without keels, 0 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 2 mm long, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, smooth, pubescent, hairy between veins but central interspaces glabrous, ciliate on margins, acute. Fertile lemma oblong, 2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 1 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa and Southern Africa. Angola. Namibia, Botswana, Limpopo, North-West.

Digitaria serotina (Walt.) Michx. *Fl. Bor. Am.* 1: 46 (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. **Basionym or Replaced Name:** *Syntherisma serotina* Walter, *Fl. Carol.* 76 (1788)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA, South Carolina: Coll?.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (371), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (170, Fig. 108), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (681).

Derivation (Clifford & Bostock 2007): L. late. Flowering late in the season.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 20–50 cm long, rooting from lower nodes. Lateral branches ample. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades ascending, lanceolate, 5–10 cm long, 3–10 mm wide. Leaf-blade surface pubescent, hairy on both sides, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, digitate, erect or ascending, unilateral, 2.5–10 cm long. Central inflorescence axis 1–2 cm long. Rhachis broadly winged. Spikelets in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster. Pedicels present, terete, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, acute, 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 elliptic, 0.33 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, 0.9 length of spikelet, membranous, 7 -veined, pubescent, acute. Fertile lemma elliptic, 1.5–1.7 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southeastern USA. Alabama, Florida, Georgia, North Carolina. **Caribbean.** Cuba.

Digitaria setifolia Stapf. Dyer, *Fl. Cap.* 7: 376 (1898).

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, Bazeia: Baur 287 (K syn); South Africa, Grahamstown: MacOwan 1300 (K syn).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, T. 38), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (383, Fig. 144), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (683 & 479, 805 as *D. nardifolia*, *D. yunnanensis*).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. seta, bristle; folium, leaf. Leaf-blades bristle-like.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 20–50 cm long. Culm-internodes distally glabrous. Culm-nodes brown, glabrous or bearded. Leaf-sheaths glabrous on surface or pilose. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades involute, 5–15 cm long, 2–3 mm wide. Leaf-blade surface scaberulous or papillose, rough adaxially, glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3(–5), paired or digitate, unilateral, 10–20 cm long. Rhachis wingless, angular, 0.2–0.4 mm wide, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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 oblong, dorsally compressed, (3–)3.2–3.8 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 0.66–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with simple hairs or capitate hairs. Upper glume hairs red. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, pubescent, with simple hairs or capitate hairs, bearing red hairs, acute. Fertile lemma oblong, 3–3.8 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute or acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. DRC. Ethiopia (inc. Eritrea). Angola, Mozambique, Zambia, Zimbabwe. Mpumalanga, Swaziland (?), Free State, Kwazulu-Natal, Lesotho, Eastern Cape. Madagascar. **China.** China South Central, China Southeast. **Indo-China.** Thailand.

TDWG4. Guangdong, Guangxi. Sichuan, Yunnan. Uttah Pradesh.

Digitaria setigera Roth ex Roem. & Schult. *Syst.* 2: 474 (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), 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) (& as *D. microbachne*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *D. microbachne*, *D. pluriens*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from India. **Basionym or Replaced Name:** *Digitaria microbachne* (Presl) Henrard, *Meded. Herb. Leid.* No. 61, 13, in obs. (1930). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India; *Heyne s.n.* (HT: B; IT: K).

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (518), C-C Hsu, *Taiwan Grasses* (1975) (547, Pl. 1427), H.J.Noltie, *The Grasses of Bhutan* (2000) (729, Fig. 44), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1533, Pl. 226), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (240, 309, 450, 453, 747 as *D. extensa*, *D. hainanensis*, *D. microbachne*, *D. microbachne* var. *calliblepharata*, *D. microstachya*, *D. puriens*, *D. timorensis* subsp. *blepharophora*, *Panicum norfolkianum*), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 753 & Pl.754), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (59, Fig. 49 & 50 as var. *calliblepharata* & var. *setigera*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 150, Fig. 17 (2006)), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 756), E.Hafliger & E.Schultz, Grass Weeds, CIBA-GEIGY (1:51(1980)).

Illustrations (Journals): *Darwiniana* (40: 187, fig.4 (2002)).

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); (as *D. microbachne*).

Derivation (Clifford & Bostock 2007): L. seta, bristle; gero, carry. With hairs or awns on the glumes or lemmas.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–80 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 3–25 cm long, 3–12 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–15, digitate or borne along a central axis, unilateral, 4–15 cm long. Central inflorescence axis 1–6 cm long. Rhachis narrowly winged, angular, glabrous on surface or with scattered hairs, scabrous on margins. Spikelet packing 0.66 their length apart. 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 lanceolate or elliptic, dorsally compressed, 2–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong or ovate, 0.1–0.25 length of spikelet, membranous, without keels, 0–3 -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, 7 -veined, with equidistant veins or with unevenly spaced veins, pubescent or setose (sometimes), eciliate on margins or ciliate on margins, acute. Fertile lemma elliptic, 2–3 mm long,

cartilaginous, much thinner on margins, grey or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 36 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia, Pacific, North America, South America.

Country /Province /State. **East tropical Africa, Western Indian ocean.** Tanzania. Aldabra, Madagascar, Seychelles. **China, Eastern Asia.** China South Central, Hainan, China Southeast. Japan, Korea, Kazan-retto, Nansei-Shoto, Ogosawara-shoto, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Assam, Bangladesh, Eastern Himalaya, India, Nepal, Pakistan, Sri Lanka, West Himalaya. Laos, Myanmar, Thailand, Vietnam. Cocos (Keeling) Is, Java, Lesser Sunda Is, Malaya, Singapore, Philippines, Christmas I. New Guinea PNG. New Guinea. **Australia, New Zealand.** Northern Territory, Queensland, Lord Howe-Norfolk Is. Kermadec Is. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji, Gilbert Is, Nauru, Niue, New Caledonia, Phoenix Archipelago, Samoa, Tonga, Vanuatu, Wallis-Futuna Is. Cook Is, Easter Is, Marquesas, Society Is. Caroline Is, Marcus Is, Marianas, Marshall Is, Wake Is. Hawaii. **Southeastern USA, Mexico.** Florida. Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America.** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. French Guiana, Guyana, Surinam. Bolivia, Colombia, Ecuador, Peru.

TDWG4. Fujian, Guangdong, Guangxi. Guizhou, Yunnan. Darjeeling, Bhutan. Darwin & Gulf. North. Veracruz. Oaxaca. Campeche, Chiapas.

Digitaria sharpeana B.K.Simon. *Austrobaileya* 8: 196 (2010).

TYPE from Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Queensland. Moreton District: Sunnybank, Brisbane, 24 March 1934, *S.T.Blake 5300* (holo: BRI; iso: NSW, CANB).

Illustrations (Journals): *Austrobaileya* (8: 197, Fig.2 (2010)).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 40–90 cm long, 4–6-noded. Leaf-sheaths outer margin hairy. Ligule an eciliate membrane, 0.1–0.15 mm long. Leaf-blades 5–30 cm long, 2–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single, unilateral, 9–20 cm long, bearing 50–120 fertile spikelets on each. Rhachis narrowly winged, angular. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, 1–4 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, 2–2.5 mm long, 0.75–1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 1.7–2 mm long, 0.8 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, 2–2.5 mm long, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, 2–2.5 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

Digitaria siamensis Henrard. *Monogr. Gen. Digitaria*, 692 (1950).

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 Thailand. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Thailand, Kanburi: Kostermans 948 (L holo).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (692).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Siam, now Thailand.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 50–70 cm long. Leaf-sheaths keeled, hirsute. Ligule an eciliate membrane. Leaf-blades 8–10 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–9, borne along a central axis, unilateral, 8–10 cm long. Central inflorescence axis 2–9 cm long. Rhachis angular, scaberulous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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 elliptic, dorsally compressed, acute, 2 mm long, with hairs extending 0 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, reaching apex of florets, thinner than fertile lemma. Upper glume elliptic, 2 mm long, 1 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. 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, hairy between veins, with clavate hairs, acute. Fertile lemma elliptic, 2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Myanmar, Thailand.

Digitaria siderograpta Chiov. *Ann. Bot., Roma*, 13: 39 (1914).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zaire, Kapiri: Bovone 21 (TO holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (695).

Derivation (Clifford & Bostock 2007): Gk. sideros, iron; graptos, painted. The sterile lemma is densely pubescent with brown hairs between the lateral nerves.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, slender, 8–40 cm long. Ligule an eciliate membrane. Leaf-blades 5–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, borne along a central axis, unilateral, 1–7 cm long. Central inflorescence axis 1–5 cm long. Rhachis wingless, angular. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, unequal, ciliate, hairy at tip, with 0.5–1 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, 2.5 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.15–0.33 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, 5 -veined, pubescent, with capitate hairs, acute. Fertile lemma elliptic, 2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis flattened.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa. Burundi, DRC. Tanzania. Malawi, Zambia.

Digitaria similis Beetle ex F.W. Gould. *J. Arnold Arbor.*, 60(2): 320 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Dominican Republic. **Basionym or Replaced Name:** *Trichachne affinis* Swallen, *Rhodora* 65(764): 355 (1963)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E.L. Ekman 16090*, 21 Oct 1930, Dominican Republic: Santiago: along roadsides at Quinquá, Valle de Cibao (US-1556826; IT: SI (fragm. & photo)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (132, Fig. 37).

Derivation (Clifford & Bostock 2007): L. like. Readily confused with one or more other species.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms geniculately ascending, 45–140 cm long. Culm-nodes glabrous. Leaf-sheaths 8–25 cm long, glabrous on surface. Ligule an eciliate membrane, 2–4 mm long, erose. Leaf-blades 9–20 cm long, 4–10 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 4–16, borne along a central axis, unilateral, 2–6 cm long. Central inflorescence axis 10–30 cm long. Rhachis angular, 0.3–0.5 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, angular, unequal, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, dorsally compressed, 4.5–5.5 mm long, with hairs extending 1.5 mm beyond apex, falling entire. Rhachilla internodes elongated below basal sterile floret.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.5–0.9 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 3.5–5 mm long, 0.75–0.9 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface hirsute. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 4.5–5.5 mm long, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, glabrous, ciliate on margins, acuminate. Fertile lemma elliptic, 3.4–4.5 mm long, 0.7–0.9 mm wide, cartilaginous, much thinner on margins, yellow or light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea 1 length of lemma, cartilaginous.

Flower and Fruit. Lodicules 2, 0.5 mm long. Anthers 3, 1–1.5 mm long. Caryopsis with adherent pericarp, 1.3–2.2 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Caribbean, Northern South America, Western South America, Brazil, Southern South America. Bolivia, Colombia. Brazil Northeast, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Salta, Santiago del Estero, Tucuman. Chaco, Corrientes, Formosa, Misiones, Santa Fe.

Digitaria simpsonii (Vasey) Fernald. *Rhodora*, 22: 103 (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 USA. **Basionym or Replaced Name:** *Panicum sanguinale* var. *simpsonii* Vasey, *Contr. U.S. Natl. Herb.* 3(1): 25 (1892)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *J.H. Simpson 120*, 1890, USA: Florida: Manatee Co. (US-2830936; IT: NY).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (375), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (695).

Derivation (Clifford & Bostock 2007): in honor of Joseph Herman Simpson (1841–1918) United States amateur botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 80–120 cm long, rooting from lower nodes. Leaf-sheaths loose, keeled, hirsute, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 7–30 cm long, 3–5 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 6–8, digitate, unilateral, 10–13 cm long. Central inflorescence axis 4–6 cm long. Rhachis angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, pubescent.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, 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, 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, 7 -veined, glabrous, acute. Fertile lemma elliptic, 3 mm long, cartilaginous, much thinner on margins, pallid, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America.
Country /Province /State. Southeastern USA. Florida.

Digitaria singularis Mez. *Engl. Jahrb. 56 Beibl.* 125, 8 (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 Paraguay. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Balansa 4368*, 15 Mar 1884, Paraguay: Vallie de l y-acan-Gauzu, pr de Valenzuela -- prairies (B; IT: BAA-576 (photo ex B), G, K (photo, SI), L, US-1445799 (ex G), US-865837 (fragm. ex G)).

Illustrations (Books): F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (134, Fig. 38), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (697).

Illustrations (Journals): *Darwiniana* (19: 125, Fig. 15 (1974)).

Derivation (Clifford & Bostock 2007): *L. singularis*, solitary; -are, pertaining to. Inflorescence consisting of a single raceme.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 40–50 cm long. Culm-internodes distally glabrous. Culm-nodes brown. Leaf-sheaths mostly shorter than adjacent culm internode, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 0.5 mm long, erose, truncate. Leaf-blades 7–15 cm long, 1–2.5 mm wide. Leaf-blade surface glabrous, hairless throughout or except near base.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–3), single, unilateral, 6–10 cm long. Rhachis narrowly winged, angular, 0.8–0.9 mm wide, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, angular, 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, 2.2–2.5 mm long, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume elliptic, 2–2.1 mm long, 0.9 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, with palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, prominently veined, pubescent, with clavate hairs, acute. Palea of lower sterile floret 0.3 mm long, 0.1 length of lemma. Fertile lemma elliptic, 2.2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, 1.4 mm long. Hilum punctiform.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Colombia. Paraguay.

TDWG4. Misiones.

Digitaria sparsifructus Ohwi. *Bull. Tokyo Sci. Mus.*, No. 18, 7 (1947).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Backer s.n.*, (BO; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. sparsus*, few; fructus, fruit. The spikelets are often solitary rather than paired.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Cataphylls inconspicuous. Culms erect, 60–100 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2 mm long, erose, truncate. Leaf-blades 5–27 cm long, 4–6 mm wide. Leaf-blade surface smooth or scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, borne along a central axis, unilateral, 5–16 cm long. Central inflorescence axis 1–8.5 cm long. Rhachis angular, scabrous on margins. Spikelet packing lax. Spikelets in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster. Pedicels present, tip discoid or 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 oblong, dorsally compressed, 1.75–2 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 lateral veins transversely connected at apex. Upper glume surface pubescent, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, with equidistant veins, with veins transversely connected at apex, pubescent, with capitate hairs, acute. Fertile lemma elliptic, 1.5–1.75 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–0.6 mm long, purple. Stigmas purple.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Java.

Digitaria stenostachya D. K. Hughes. *Kew Bull.* 1923, 311 (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 stenostachyum* Benth., *Fl. Austral.* 7: 470 (1878), non Thwaites (1864). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.J.H. von Mueller s.n.*, May 1856, Australia: Northern Australia: upper Victoria River (K; IT: L, US-733552, W).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(24)), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (707).

Derivation (Clifford & Bostock 2007): Gk. stenos, narrow; stachys, ear of corn. Inflorescence a narrow spike or spike-like panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–50 cm long, 3–10 -noded. Culm-nodes glabrous. Leaf-sheaths antrorsely scabrous, glabrous on surface, outer margin glabrous. Ligule an eciliate membrane, 0.6–1 mm long, truncate or acute. Leaf-blades flat or conduplicate, 5–12 cm long, 1–3 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or borne along a central axis, unilateral, 3–9 cm long, bearing 20–30 fertile spikelets on each. Central inflorescence axis 0–1.5 cm long. Rhachis angular, 0.3–0.4 mm wide, scabrous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 0.3–0.5 mm long, scabrous, glabrous, 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 oblong, dorsally compressed, 2.5–2.75 mm long, 0.65–0.9 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 1.7–1.9 mm long, 0.65–0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. Upper glume margins eciliate or ciliate. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1 length of spikelet, membranous, 7 -veined, prominently veined, pilose, hairy between veins but central interspaces glabrous, acute. Fertile lemma lanceolate or elliptic, 2.5–2.75 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface reticulate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory.

TDWG4. Darwin & Gulf, Victoria R & Barkly Tableland. Inland.

Digitaria stenotaphrodes (Nees ex Steud.) Stapf. *Kew Bull.* 1906, 77 (1906).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Pacific Islands. **Basionym or Replaced Name:** *Panicum stenotaphroides* Nees ex Steud., *Syn. Pl. Glumac.* 1: 41 (1854)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ins. Choin, *Cuming s.n.* (HT: P).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (710 & 513 as *D. pacifica*).

Derivation (Clifford & Bostock 2007): Gk. -odes, resembling. Similar to *Stenotaphrum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Butt sheaths pilose. Culms geniculately ascending, 30–90 cm long. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades linear or lanceolate, 5–20 cm long, 3–6 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, digitate, end to end, erect, unilateral, 4–10 cm long. Rhachis broadly winged, folded longitudinally to embrace spikelets or forming pockets, 2–4 mm wide. Spikelet packing 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, 2.5–3.5 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 mm long, 0.05 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume lanceolate or ovate, 0.1–0.33 length of spikelet, hyaline, without keels, 0–1 -veined. Upper glume primary vein absent or distinct. Upper glume lateral veins absent. Upper glume surface glabrous or puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic or ovate, 1 length of spikelet, membranous, 5 -veined, ribbed, with equidistant veins, smooth, glabrous or puberulous, acute. Fertile lemma elliptic, 2.5–3.5 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Southwestern Pacific, South-central Pacific.

Digitaria stewartiana Bor. *Kew Bull.* 1951, 166 (1951).

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 India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Kashmir: Chunagund, near Kargil, Ladak, 3,200 m, 25 Aug. 1940, R.R. Stewart 21047 (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Ralph Randles Stewart (1890–1993), United States missionary and botanist at Rawalpindi, Pakistan.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 7–15 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 1–1.5 mm long, truncate. Leaf-blades 3–6 cm long, 3–5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 3–4.5 cm long. Rhachis broadly winged, with rounded midrib, glabrous on surface. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, filiform, 1–1.5 mm long, scaberulous, 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, acute, 1.5–2 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure. Upper glume ovate, 1.5–2 mm long, 1 length of spikelet, hyaline, 3 -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, 5 -veined, glabrous, acute. Fertile lemma elliptic, 1.5–2 mm long, cartilaginous, much thinner on margins, pallid, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. China. Tibet, Xinjiang. **Indian Subcontinent.** Pakistan, West Himalaya.

Digitaria stricta Gaudich., non Roth(1821). *Voy. Uranie* 409 (1826).

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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from Mariana Islands. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gaudichaud s.n.*, Marianna Islands (P).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (733, Fig. 45), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (174, as *D. denudata*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 763/764 as *Digitaria stricta* var. *glabrescens* & as *Digitaria stricta* var. *denudata*).

Derivation (Clifford & Bostock 2007): L. erect. Inflorescence branches erect.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 20–40 cm long. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1.5 mm long, lacerate, truncate. Leaf-blades 4–15(–30) cm long, 2–6 mm wide. Leaf-blade surface hirsute, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6(–17), digitate, unilateral, 4–14 cm long. Central inflorescence axis 1–3(–5) cm long. Rhachis narrowly winged, angular, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, scabrous, bearing a few hairs, hairy at tip, with 0.2–1 mm long hairs, 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 oblong, dorsally compressed, obtuse, 1.1–1.5 mm long, falling entire.

Glumes. Glumes both absent or obscure or one the lower absent or obscure, shorter than spikelet. Upper glume elliptic, 0–0.33 length of spikelet, membranous, 3 -veined. Upper glume surface glabrous or pubescent, with capitate hairs. 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, pubescent, hairy between veins, with capitate hairs, acute. Fertile lemma elliptic, 1.1–1.5 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

N = 9 (2 refs TROPICOS), or 18 (3 refs TROPICOS).

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. **Arabian Peninsula, China, Eastern Asia.** Oman. China South Central, China Southeast, Tibet. Taiwan. **Indian Subcontinent, Indo-China.** Assam, Bangladesh, Eastern Himalaya, India, Nepal, Pakistan, Sri Lanka, West Himalaya. Myanmar.

TDWG4. Fujian, Sichuan, Yunnan. Bhutan, Sikkim.

Digitaria subcorymbosa (A.Camus) A.Camus. Lecomte, *Fl. Gen. Indo-Chine*, 7: 406 (1922).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Cambodia. **Basionym or Replaced Name:** *Paspalum subcorymbosum* A. Camus, *Notul. Syst. (Paris)* 2: 223 (1912)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Indochina, Cambodia, Mt. Pursat: Godefroy.

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (719).

Derivation (Clifford & Bostock 2007): L. sub, approaching. Similar to *Paspalum corymbosum*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 75–125 cm long. Culm-internodes terete, distally glabrous. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, obtuse. Leaf-blades 2–40 cm long, 7–9 mm wide, stiff, glaucous. Leaf-blade surface pilose, sparsely hairy or moderately hairy. Leaf-blade margins cartilaginous, scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, unilateral, 5–20 cm long. Central inflorescence axis 10–15 cm long. Rhachis angular, scabrous on margins, glabrous on margins. Spikelet packing lax. Raceme-bases linear, 10–50 mm long. Spikelets in pairs. Fertile spikelets sessile and pedicelled, 2 in the cluster. Pedicels present, 3–4 mm long, scaberulous, villous, hairy at base, with 5–6 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, dorsally compressed, 3–3.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1 mm long, 0.05 length of spikelet, membranous. Lower glume apex acute. Upper glume oblong, 0.3 mm long, 0.15 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 lanceolate, 1 length of spikelet, membranous, 7 -veined, pubescent, ciliate on margins, bearing hairs 0.25–0.35 mm long, acute. Fertile lemma lanceolate, 3–3.5 mm long, cartilaginous, much thinner on margins, without keel. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG), Continent. Tropical Asia.

Country /Province /State. Indo-China. Cambodia, Vietnam.

Digitaria subsulcata Robyns & Van der Veken. *Bull. Jard. Bot. Brux.* 22: 144 (1952).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zaire, Tukpwe: Lecomte 5 (BR holo, K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. sub, approaching; sulcus, furrow; -ata, possessing. The palea of the sterile floret is somewhat sulcate.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Basal innovations intravaginal. Culms geniculately ascending or decumbent, 50–70 cm long, rooting from lower nodes. Culm-internodes 2–3 cm long. Lateral branches sparse. Leaf-sheaths pubescent, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades convolute, 4–10 cm long, 3–4 mm wide. Leaf-blade surface pilose, sparsely hairy, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Peduncle 10–20 cm long. Racemes 2, paired, unilateral, 10–16 cm long. Rhachis angular, 0.6–0.7 mm wide, scaberulous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 1–5 mm long, scaberulous, pubescent, hairy at tip, 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, dorsally compressed, 3–3.5 mm long, 1 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.25 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 lanceolate, 1 length of spikelet, membranous, 5 -veined, with thickened veins, pubescent, hairy between veins, acuminate. Fertile lemma elliptic, 3–3.5 mm long, cartilaginous, much thinner on margins, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG), Continent. Africa.

Country /Province /State. West-central tropical Africa. DRC.

Digitaria swalleniana Henrard. *Monogr. Gen. Digitaria*, 722 (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 Brazil. **Basionym or Replaced Name:** *Trichachne sericea* Swallen, *Contr. U.S. Natl. Herb.* 29(6): 264–265 (1948) [1949]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.R. Swallen 9120*, 20 Apr 1946, Brazil: Rio Grande do Sul (US-1912777).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineae (1969) (353, Fig. 147), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (136, Fig. 39), B.Rosengurtt, *Gramineae Uruguayas I* (1970) (310, Fig. 131), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (723).

Illustrations (Journals): *Darwiniana* (19: 102, Fig. 8 (1974)), *Ruizia* (13:399 Fig 53d-g (1993)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Jason Richard Swallen (1903–1991) United States botanist.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly, hairy. Culms erect, 25–45 cm long. Culm-internodes distally glabrous. Leaf-sheaths pubescent. Ligule an eciliate membrane, 2 mm long. Leaf-blades 2–5 cm long, 2–4 mm wide. Leaf-blade surface pubescent. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 15–30, borne along a central axis, appressed, unilateral, 2–4 cm long. Central inflorescence axis 8–10 cm long. Rhachis angular. 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 lanceolate, dorsally compressed, acuminate, 4.5–5 mm long, with hairs extending 2 mm beyond apex, falling entire. Rhachilla internodes elongated below basal sterile floret. Rhachilla elongation 0.3–0.7 mm long.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 0.5 mm long, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume lanceolate, 3–3.5 mm long, 0.75 length of spikelet, narrower than lemma, membranous, without keels, 3 -veined. Upper glume surface villous, hairy between veins. Upper glume hairs white. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 5 -veined, with equidistant veins, glabrous or puberulous, hairy between veins, villous on margins, bearing white hairs, acuminate. Fertile lemma lanceolate, 3 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.5–0.7 mm long.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Brazil, Southern South America. Peru. Brazil South. Argentina Northeast, Argentina Northwest, Paraguay, Uruguay.

TDWG4. Catarina, Rio Grande do Sul. Catamarca, Jujuy, Salta, Tucuman. Buenos Aires, Chaco, Cordoba, Corrientes, Entre Rios, Formosa, Santa Fe.

Digitaria tararensis Henrard. *Monogr. Gen. Digitaria*, 728 (1950).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Papua New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.J. Brass* 8695, Jan 1937, Papua New Guinea: New Guinea I., Western Div. (A; IT: BM, BO, BRI, L, US-1723617).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Tarara, Papua New Guinea.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Cataphylls evident. Butt sheaths pilose. Culms erect or geniculately ascending, 50–100 cm long. Ligule an eciliate membrane, 0.5–2.5 mm long, erose, truncate. Leaf-blades 4–12 cm long, 2–5 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, borne along a central axis, unilateral, 4–16 cm long, simple or with branchlets at base of longer racemes. Central inflorescence axis 1.5–5 cm long. Rhachis angular, scabrous on margins. Spikelets in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster. Pedicels present, 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 oblong, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.2–0.4 mm long, 0.1–0.15 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate to acute. Upper glume elliptic, 1–2 mm long, 0.4–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume lateral veins without cross-veins. 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, 7 -veined, with unevenly spaced veins, with veins transversely connected at apex, pubescent, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasia. New Guinea PNG. New Guinea.

Digitaria tenuifolia Goetghebeur. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 407 (1975).

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, Mungwi: Robinson 4274 (SRGH holo, K, M).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): *L. tenuis*, slender; folium, leaf. Leaf-blades narrow.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, slender, 10–20 cm long. Culm-nodes brown, pubescent. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades filiform, involute, 5–15 cm long, 0.5–1 mm wide. Leaf-blade surface papillose, rough on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, erect, unilateral, 3–5 cm long. Rhachis narrowly winged, angular, 0.2–0.3 mm wide, smooth on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 1–3.5 mm long, scaberulous, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, dorsally compressed, 2.8–3.4(–4) mm long, falling entire.

Glumes. Glumes two, dissimilar, reaching apex of florets, thinner than fertile lemma. Lower glume oblate, 0.3–0.5 mm long, 0.05–0.1 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume oblong, 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 oblong, 1 length of spikelet, membranous, 5(–7) -veined, pubescent, with dorsal tufts of hair (at base), 2 hair tufts in all, acute. Fertile lemma oblong, 2.5–3.5 mm long, cartilaginous, much thinner on margins, mid-green, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Digitaria tenuis (Nees) Henrard. *Blumea*, 1: 99 (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:** *Trichachne tenuis* Nees, *Fl. Bras. Enum. Pl.* 2(1): 89 (1829)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Martius s.n.*, Brazil: Piaui (M (photo, SI); B, BAA-648 (fragm. ex B), SI (fragm. ex M), US (fragm.)).

Illustrations (Books): S.A.Renvoize, *The Grasses of Bahia*, 1984 (250, Fig. 93), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (733).

Derivation (Clifford & Bostock 2007): *L. tenuis*, slender.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50 cm long. Culm-internodes distally glabrous. Leaves cauline. Leaf-sheaths pubescent. Ligule a ciliolate membrane, 2–2.5 mm long, erose. Leaf-blades 6–13 cm long, 4–7 mm wide. Leaf-blade surface pubescent, densely hairy.

Inflorescence. Inflorescence composed of racemes. Peduncle 8–15 cm long, glabrous. Racemes 4–13, digitate, unilateral, 5–12 cm long. Central inflorescence axis 1–3 cm long. Rhachis angular, scabrous on margins. Spikelets appressed, in pairs. Fertile spikelets pedicelled. Pedicels present, unequal, 1–3 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 2.7–3.3 mm long, with hairs extending 1–2 mm beyond apex, falling entire.

Glumes. Glumes two, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.3–0.5 mm long, 0.1 length of spikelet, 0 -veined. Lower glume lateral veins absent. Upper glume lanceolate, 1.8–2 mm long, 0.66 length of spikelet, membranous, without keels, 3–5 -veined. Upper glume surface pilose. Upper glume hairs white or tawny. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1 length of spikelet, membranous, 7–9 -veined, villous, acute. Fertile lemma lanceolate, 2–2.6 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma surface granulose. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Brazil. Guyana, Venezuela. Brazil Northeast, Brazil North.

TDWG4. Bahia, Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Penambuco, Alagoas, Sergipe.

Digitaria ternata (A.Rich.) Stapf. Dyer, *Fl. Cap.* 7: 376 (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), 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).

TYPE from Ethiopia. **Basionym or Replaced Name:** *Cynodon ternatus* Hochst. ex A. Rich., *Tent. Fl. Abyss.* 2: 405 (1851). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Schimper* 76, 23 Sept 1837, Ethiopia: Tigray: prope Adoua, herba mala in campis poae Abyssinicae culti prope Adoam (P; IST: B, K, L, US-3298788, WAG). LT designated (as type) by Henrard, *Monogr. Digitaria* 738 (1950).

Illustrations (Books): R.M.Polhill, F.T.E.A., *Gramineae* (3(1982):632, Fig 146), G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, T. 38), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (418, Fig 348), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (249, Fig 100), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (221), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (& as *D. argyrostachya*), H.J.Noltie, *The Grasses of Bhutan* (2000) (733, Fig. 45), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 755 & pl.756), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 762), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:52(1980)).

Illustrations (Journals): *Darwiniana* (19: 123, Fig. 14 (1974)).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. terni, three each; -ata, possessing. Spikelets in clusters of three.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 20–100 cm long. Ligule an eciliate membrane. Leaf-blades 5–25(–40) cm long, 3–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–11, digitate, unilateral, 3–23 cm long. Rhachis broadly winged, with sharp-edged midrib. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, ciliate, hairy at tip, with 0.2–1 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, 1.8–2.7 mm long, with hairs extending 0.2–0.8 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 0.66–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, with clavate hairs. 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(–9) -veined, with unevenly spaced veins (3 central veins approximate), pubescent or pilose, hairy between veins (generally or in stripes), with clavate hairs, bearing hairs 0.2–0.8 mm long, acute. Fertile lemma elliptic, 1.8–2.7 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis flattened.

$N = 18$ (2 refs TROPICOS). $2n = 36$ (1 ref TROPICOS).

Distribution (TDWG). **Continent.** Europe (*), Africa, Temperate Asia, Tropical Asia, Australasia (*), North America (*), South America (*).

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, Middle Atlantic ocean.** Ghana, Guinea, Mali, Nigeria, Sierre Leone. Cameroon, Rwanda, DRC. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Northern Cape, Western Cape, Eastern Cape. **Arabian Peninsula, China.** China South Central, China Southeast. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Assam, Eastern Himalaya, India, Nepal. Myanmar, Thailand. Java, Lesser Sunda Is, Malaya, Philippines, Sumatra. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Australia.** New South Wales (*), Tasmania (*). **Mexico.** Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico. **Caribbean, Brazil, Southern South America.** Jamaica (& as *D. argyrostachya*). Brazil West Central, Brazil South. Argentina Northwest.

TDWG4. Guangxi, Hong Kong. Guizhou, Sichuan, Yunnan. Darjeeling, Bhutan. Nagaland. Kerala, Karnataka. Tamilnadu, Uttah Pradesh, West Bengal. Tablelands. Jujuy, Tucuman. Cordoba, La Pampa, Santa Fe. Mexico State, Puebla. Aguascalientes, Coahuila, Durango, Guanajuato, Hidalgo, Queretaro, Zacatecas. Sonora. Jalisco, Michoacan, Oaxaca.

Digitaria texana Hitchcock. *Proc. Biol. Soc. Wash.* 41: 162 (1928).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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, Texas. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Hitchcock 5479*, 27 Jun 1910, USA: Texas: sandy oak woods at Sarita (US-927604).

Recent Synonyms: *Digitaria albicoma* Swallen, *Journ. Wash. Acad. Sc.* 214 (1940). *Digitaria subcalva* Hitchcock, *Proc. Biol. Soc. Wash.* 41: 162 (1928).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (377), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (738).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Texas, USA.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Butt sheaths pubescent. Culms decumbent, 30–70 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths glabrous on surface or pubescent. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 10–15 cm long, 2–5 mm wide. Leaf-blade surface glabrous to hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–12, digitate, unilateral, 6–10 cm long. Central inflorescence axis 1–5 cm long. Rhachis angular, scabrous on margins. Spikelet packing lax. 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 oblong, 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 elliptic, 1 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface puberulous or 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, 7 -veined, puberulous or pubescent, hairy between veins but central interspaces glabrous, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, grey, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Flower and Fruit. Caryopsis with adherent pericarp, oblong. Embryo 0.33 length of caryopsis.

$2n = 54$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. South-central USA, Southeastern USA, Mexico. Texas. Florida. Gulf (Mexico). Veracruz.

Digitaria thouaresiana (Flggi) A. Camus. *Bull. Soc. Bot. France*, 75: 914 (1929).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Madagascar. **Basionym or Replaced Name:** *Paspalum thouarsianum* Flggi, *Gram. Monogr.*, *Paspalum* 1: 148 (1810)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Dupetit Thouars s.n.*, Madagascar (P).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):136, t. 38), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (385, Fig 145), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (739 & 447, 667, 759 as *D. melanochila*, *D. scaettae*, *D. tricostulata*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. As for *Thuarea*.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms geniculately ascending, 20–100 cm long. Ligule an eciliate membrane. Leaf-blades 3–20 cm long, 2–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–14, digitate, unilateral, 2–12 cm long. Rhachis broadly winged, with rounded midrib or sharp-edged midrib. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, unequal, scaberulous, glabrous or puberulous, 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, 1–1.7 mm long, with hairs extending 0 mm beyond apex, 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 glabrous or pubescent, with clavate hairs. 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 unevenly spaced veins (3 central veins approximate), glabrous or puberulous (mealy), hairy between veins (generally or in stripes), with clavate hairs, bearing hairs 0.05–0.1 mm long, acute. Fertile lemma elliptic, 1–1.7 mm long, cartilaginous, much thinner on margins, dark brown or black, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Caryopsis flattened.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Cameroon, Rwanda, DRC. Kenya, Tanzania, Uganda. Mozambique, Zimbabwe. Mpumalanga, Free State, Kwazulu-Natal, Eastern Cape. Madagascar.

Digitaria thwaitesii (Hackel) Henrard. *Blumea*, 1: 101 (1934).

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. **Basionym or Replaced Name:** *Panicum thwaitesii* Hack., *Oesterr. Bot. Z.* 51: 334 (1901)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *G.H.K. Thwaites* 857, no date, Sri Lanka (US-1126069 (fragm.)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (740).

Derivation (Clifford & Bostock 2007): in honor of George Henry Kendrick Thwaites (1812–1882) English-born botanist, sometime Superintendent Botanic Gardens, Paradeniya, Sri Lanka.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Butt sheaths pubescent. Culms erect, 40–80 cm long, 2–3 -noded, with 0.4 of their length below uppermost node. Culm-nodes glabrous. Lateral branches lacking. Leaf-sheaths hirsute. Ligule an eciliate membrane, 1.5–2 mm long, truncate or obtuse. Leaf-blades flat or conduplicate, 7–14 cm long, 2–4 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 5–10 cm long. Rhachis broadly winged, with rounded midrib, scabrous on margins. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, 0.5–4 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, acute, 2–3 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure. Upper glume elliptic, 2–3 mm long, 1 length of spikelet, membranous, 5 -veined. Upper glume surface pubescent, hairy between veins, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins but central interspaces glabrous, with verruculose hairs, acute. Fertile lemma elliptic, 1.75 mm long, cartilaginous, much thinner on margins, dark brown, shiny, without keel, 3 -veined, 0–3 -veined. Lemma surface smooth. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 0.25 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. China. Hainan, China Southeast. **Indian Subcontinent, Indo-China.** Sri Lanka. Thailand.

TDWG4. Fujian, Guangdong.

Digitaria thyrsoidea Balansa. *Morot, Journ. de Bot.* 4: 138 (1890).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Indochina. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: *B. Balansa s.n.*, 28 Oct 1886, (L).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (743).

Derivation (Clifford & Bostock 2007): Gk. -oidea, resembling. Inflorescence a thyrse-like panicle.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, 100 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blades 40–60 cm long, 9–13 mm wide. Leaf-blade surface glabrous, hairless except near base. Leaf-blade margins scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 20–40, borne along a central axis, the lowest whorled, unilateral, 15–25 cm long. Central inflorescence axis 15–25 cm long. Rhachis angular, scaberulous on margins. Spikelet packing distant. Raceme-bases filiform, 10–20 mm long. Spikelets 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 oblong, dorsally compressed, 2–2.5 mm long, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume orbicular, 0.1 mm long, 0.05 length of spikelet, hyaline. Lower glume apex obtuse. Upper glume oblong, 0.3–0.4 mm long, 0.15 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 oblong, 1 length of spikelet, membranous, 7 -veined, pubescent, bearing hairs 0.1–0.35 mm long, acute. Fertile lemma oblong, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Vietnam.

Digitaria tisserantii Jacques-Felix. *Journ. Agric. Trop. & Bot. Appliq.* 13: 40 (1966).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Republique Centrafricaine, Bambari: Tisserant 696 (P holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Charles Tisserant (1886–1962) French cleric ethnologist, botanist and traveller.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms 60–100 cm long, 2–2.5 mm diam. Culm-nodes glabrous. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades 5–10 cm long, 3–5 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, digitate or borne along a central axis, unilateral, 14–18 cm long. Central inflorescence axis 2–8 cm long. Rhachis subterete. Spikelet packing distant. Raceme-bases filiform, 10–15 mm long. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, filiform, terete, flexuous or sinuous, unequal, 5–18 mm long, ciliate, hairy at tip, with 1–1.5 mm long hairs, 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, dorsally compressed, 2 mm long, 1 mm wide, with hairs extending 0.5 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume ovate, 0.8 mm long, 0.5 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pilose. 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, pilose, acute. Fertile lemma ovate, 2 mm long, cartilaginous, much thinner on margins, dark brown, without keel, 3 -veined, 0–3 -veined. Lemma lateral veins obscure. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa. Central African Republic.

Digitaria tomentosa (Koenig ex Rottl.) Henrard. *Blumea*, 1: 100 (1934).

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 India. **Basionym or Replaced Name:** *Milium tomentosum* J. Koenig ex Rottler, *Ges. Naturf. Freunde Berlin Neue Schriften* 4: 220 (1803)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: "Intra fissuras rupium in monte Wandiwash."; India, Wandiwash Mt.: Coll? (K iso).

Illustrations (Books): K.M.Mathew, *Flora Palni Hills* (1996) (816, Pl 816), K.M.Mathew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (pl.757), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (365), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (750).

Derivation (Clifford & Bostock 2007): L. tomentum, stuffing material of a pillow; -osa, abundance. Plant invested in part or totally with short hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, 30–60 cm long. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long, entire or lacerate, truncate or obtuse. Leaf-blades 10–30 cm long, 6–12 mm wide, flaccid. Leaf-blade surface puberulous or pubescent or woolly, moderately hairy or densely hairy. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, ovate to corymbose, effuse, 10–20 cm long, 6–12 cm wide. Primary panicle branches 6–12 cm long. Panicle branches capillary, flexuous, bearded in axils. Spikelets 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, 2–2.5 mm long, falling entire.

Glumes. Glumes both absent or obscure.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, pubescent, hairy between veins, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, light brown, without keel, 3 -veined, 0–3 -veined. Lemma surface striate. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1–1.25 mm long. Caryopsis with adherent pericarp, obovoid, 1.4 mm long. Embryo 0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. India, Sri Lanka. Thailand.

Digitaria tricholaenoides Stapf. Dyer, *Fl. Cap.* 7: 381 (1898).

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: ST: *Buchanan 11*, South Africa: Coast Region: Long Williamstown Division: Amatola Mountains (K).

ST: *Baur 317*, South Africa: Eastern Region: Tembuland: Tabase, near Bazeia, 2500 ft (K).

ST: *Buchanan 87*, South Africa: Eastern Region: Natal: Umsinga and base of the Biggars Berg (K).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (402, Fig 337), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (114, Fig 67), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (755).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

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 ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths pubescent, persistent and investing base of culm, with compacted dead sheaths. Culms 20–55 cm long. Leaf-sheaths pubescent. Ligule an eciliate membrane. Leaf-blades 4–20 cm long, 2–7 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade margins cartilaginous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3(–7), paired or digitate, unilateral, 3–13 cm long. Rhachis flattened, 0.7 mm wide. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–5 in the cluster. Pedicels present, terete, unequal, 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, dorsally compressed, 3–5 mm long, 1 mm wide, with hairs extending 2–3 mm beyond apex, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 1–1.5 mm long, 0.2–0.3 length of spikelet, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume lanceolate, 0.5–0.66 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface villous. Upper glume hairs white or purple, 1–2 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, 5–7 -veined, villous, hairy between veins but central interspaces glabrous, bearing white hairs or purple hairs, bearing hairs 2–4 mm long, acute. Fertile lemma lanceolate, 3–5 mm long, chartaceous, much thinner on margins, yellow, without keel. Lemma margins flat, covering most of palea. Lemma apex acuminate. Palea cartilaginous.

Flower and Fruit. *N* = 9 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa, Western Indian ocean. North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Eastern Cape. Madagascar.

Digitaria trinervis Van der Veken. *Bull. Jard. Bot. Nation. Belg.*, 45(3–4): 402 (1975).

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, Lichenya Plateau: Robinson 5321 (SRGH holo, K).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):138, t. 40).

Derivation (Clifford & Bostock 2007): *L. tria*, three; *nervum*, nerve. Upper glume three-nerved.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Culms prostrate, 10–20 cm long. Culm-nodes brown, pubescent. Leaf-sheaths smooth or scaberulous, glabrous on surface or pilose. Ligule an eciliate membrane, 2 mm long, erose, truncate. Leaf-blades 3–5 cm long, 1–3 mm wide. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–8, borne along a central axis, unilateral, 1–4 cm long. Rhachis wingless, angular, 0.2 mm wide, scaberulous on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–3 mm long, scaberulous, 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, 2.1–2.4 mm long, falling entire.

Glumes. Glumes two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.1–0.2 length of spikelet, hyaline, mid-green or purple, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate or obtuse. Upper glume oblong, 0.75 length of spikelet, membranous, mid-green or purple, 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 oblong, 1 length of spikelet, membranous, 7 -veined, with unevenly spaced veins, glabrous, acute. Fertile lemma elliptic, 2.1–2.4 mm long, cartilaginous, much thinner on margins, purple, without keel. Lemma margins flat, covering most of palea. Lemma apex acute or acuminate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Malawi.

Digitaria x umfolozii D.W.Hall. *Turrialba*, 33(3): 327 (1983).

TYPE from USA. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: USA: Florida: Alachua County; cultivated in plot at the Experiment Station at the University of Florida in Gainesville, 28 Sept 1977, *D.W. Hall 482* (HT: FLAS; IT: BH, BM, FSU, GH, ISC, MO, NY, US, USF).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Digitaria ursulae H. Scholz. *Willdenowia*, 9(2): 291 (1979).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Togo. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Togo, Mango: Scholz 236 (B holo, K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Ursula Scholtz (fl. 1979) who collected in Togo.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Butt sheaths purple. Culms erect, 30–60 cm long. Culm-internodes terete, distally glabrous. Culm-nodes glabrous. Leaf-sheaths longer than adjacent culm internode, glabrous on surface, outer margin hairy. Ligule a ciliolate membrane, 1–2 mm long, truncate. Leaf-blades 3–18 cm long, 2–4.5 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, digitate, straight or arcuate, unilateral, 7–16 cm long. Rhachis wingless, angular, glabrous on surface, scabrous on margins. Spikelets in threes or clustered at each node. Fertile spikelets pedicelled, 3–4 in the cluster. Pedicels present, unequal, 1–3 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, 1.9–2.1 mm long, 0.9–1 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.1 length of spikelet, hyaline, 0 -veined. Lower glume lateral veins absent. Lower glume apex truncate. Upper glume lanceolate, 0.9 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, with equidistant veins, pubescent, hairy between veins, with clavate hairs, acute. Fertile lemma ovate, 1.9–2.1 mm long, cartilaginous, much thinner on margins, light brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Togo.

Digitaria veldkampiana B.K.Simon. *Austrobaileya* 8: 198 (2010).

TYPE from Australia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Queensland. Maranoa District: SE of Surat, Thomby Range, 21 May 1960, *S.T.Blake 21286* (holo: BRI; iso: L, MEL).

Illustrations (Journals): *Austrobaileya* (8: 197, Fig.2 (2010)).

Classification. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 30–50 cm long, 4–8 -noded. Leaf-sheaths pilose. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blades 2–6 cm long, 2–4 mm wide. Leaf-blade surface smooth, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, spreading, unilateral, 6–10 cm long, bearing 26–32 fertile spikelets on each. Rhachis wingless or narrowly winged, angular. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster, heteromorphic (pedicelled spikelets with ciliate margins). Pedicels present, unequal, 0.7–3 mm long, tip rectangular.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 3.5–4 mm long, 1–1.2 mm wide, falling entire.

Glumes. Glumes shorter than spikelet, thinner than fertile lemma. Lower glume oblate, 0.2 mm long, 0.05 length of spikelet, membranous, 0 -veined. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume apex truncate. Upper glume lanceolate, 2.5 mm long, 0.66–0.75 length of spikelet, membranous, without keels, 5 -veined. Upper glume surface glabrous or puberulous, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3.5–4 mm long, 1 length of spikelet, membranous, 7 -veined, ribbed, with equidistant veins, glabrous or pubescent, villous on margins (pedicelled spikelet), acuminate. Fertile lemma lanceolate, 3.5–4 mm long, cartilaginous, much thinner on margins, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea 1 length of lemma, cartilaginous.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

Inland.

Digitaria velutina (DC) Hitchcock, non Beauv.(1812). *Proc. Biol. Soc. Wash.* 40: 84 (1927).

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 Yemen. **Basionym or Replaced Name:** *Phalaris velutina* Forssk., *Fl. Aegypt.-Arab.* 17 (1775). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Forsskal 115*, Mar 1763, Yemen: Bolghose (C; IT: C).

Recent Synonyms: *Digitaria divaricata* Henrard, *Blumea*, 1: 96 (1934).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):139, t. 41), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (401, Fig 336 as *D. zeheri*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (as *D. aff. divaricata*), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (255, Fig 102), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (221), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (379), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (187, Fig 61), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (196, 248, & 807 as *D. divaricata*, *D. fenestrata*, *D. zeyheri*).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. velvety. Plant in whole or in part covered with dense short hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–80 cm long. Ligule an eciliate membrane. Leaf-blades linear or lanceolate, 2–15 cm long, 3–17 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (3–)7–20, digitate or borne along a central axis, unilateral, 3–13 cm long. Central inflorescence axis 1–7 cm long. Rhachis narrowly winged, angular, glabrous on surface or with scattered hairs, scabrous on margins. Spikelet packing lax, 0.5–0.8 their length apart. Spikelets appressed, in pairs. Fertile spikelets pedicelled, 2 in the cluster, all alike. 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, subacute, 1.5–2.1 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure or two, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0–0.15 mm long, 0.1 length of spikelet. Upper glume lanceolate, 0.65–0.8 length of spikelet, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7 -veined, with equidistant veins, puberulous or pubescent, hairy between veins, eciliate on margins or ciliate on margins, acute. Fertile lemma elliptic, 1.5–2.1 mm long, cartilaginous, much thinner on margins, grey or dark brown, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea, ciliate. Palea cartilaginous.

Distribution (TDWG). Continent. Europe (*), Africa, Temperate Asia, Australasia, North America, South America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Northern Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Egypt. Rwanda. Eritrea, Ethiopia (inc. Eritrea), Socotra, Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Kwazulu-Natal, Eastern Cape. Madagascar. **Arabian Peninsula.** Oman, Saudi Arabia, Yemen. **Australia.** New South Wales. **Mexico.** Central Mexico, Gulf (Mexico), Southwest Mexico. **Mesoamerica.** Costa Rica.

TDWG4. Coast. Distrito Federal, Puebla. Oaxaca.

Digitaria venezuelae Henrard. *Monogr. Gen. Digitaria*, 780 (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Fendler 1739*, Venezuela: Aragua (W, US (fragm.)).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (781 & 782 as var. *fendleri*).

Derivation (Clifford & Bostock 2007): from Venezuela.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culm-internodes distally glabrous. Ligule an eciliate membrane, 1 mm long. Leaf-blades 10 cm long, 3 mm wide.

Inflorescence. Inflorescence composed of racemes. Peduncle 2 cm long, glabrous. Racemes 4–5, digitate, unilateral, 12–14 cm long. Central inflorescence axis 3 cm long. Rhachis angular, 0.3 mm wide, scabrous on margins. Spikelets appressed, in threes. Fertile spikelets pedicelled. Pedicels present, unequal, 1–3 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, 1.7–2.2 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, 3 -veined. Upper glume surface pubescent, hairy between veins, with clavate hairs. Upper glume hairs tawny. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, pubescent, hairy between veins but central interspaces glabrous, with clavate hairs, bearing tawny hairs, acute. Fertile lemma elliptic, 1.7–2.2 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Palea cartilaginous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. French Guiana, Surinam, Venezuela.

Digitaria ventriosa Van der Veken. *Bull. Jard. Bot. Brux.* 2: 123 (1962).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from DRC. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Zaire, Moreau: Schmitz 7122 (BR holo).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (3(1989):137, t. 39).

Derivation (Clifford & Bostock 2007): *L. venter*, belly; *-osa*, abundance. Fertile lemma at maturity conspicuously swollen.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, culms solitary or caespitose. Culms 10–30 cm long. Culm-nodes brown, glabrous or pubescent. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades flat or involute, 3–4 cm long, 2–3 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, hairy on both sides. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2–5 cm long. Rhachis broadly winged, with sharp-edged midrib, 0.8–1 mm wide, ciliate on margins. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, angular, unequal, 0.5–2.5 mm long, scabrous, puberulous, hairy at tip, 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 or oblong, dorsally compressed, gibbous, 2–2.2 mm long, with hairs extending 0.5 mm beyond apex, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume oblong, gibbous, 0.5 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 oblong, 1 length of spikelet, membranous, 5 -veined, pilose, acute. Fertile lemma oblong, gibbous, 2–2.2 mm long, cartilaginous, much thinner on margins, light brown, keeled. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, South tropical Africa. DRC. Angola, Zimbabwe.

Digitaria villiculmis Henrard. *Blumea*, 1: 106 (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 Venezuela. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Fendler 1740, 13 Sep 1855, Venezuela: Biscaina prope coloniam Tovar, 4000 ft (W-22949; IT: K).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (786).

Derivation (Clifford & Bostock 2007): *L. villi*, long weak hairs; culmus, stalk. Except for the spikelets the plant is densely villous.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 25–45 cm long, 2-noded, with 0.4–0.5 of their length below uppermost node. Culm-internodes distally hirsute. Culm-nodes constricted, bearded. Leaf-sheaths hirsute, hairs yellow. Ligule an eciliate membrane, 1 mm long. Leaf-blades 8–9(–20) cm long, 2–3 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface hirsute, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 6–9 cm long. Central inflorescence axis 1–1.5 cm long, villous. Rhachis angular, villous on surface, scabrous on margins. Raceme-bases hirsute. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster. Pedicels present, unequal, 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 or ovate, dorsally compressed, 1.5–1.9 mm long, 1 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 surface pubescent, with capitate 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, 5-veined, pubescent, with capitate hairs, obtuse. Fertile lemma elliptic, 1.5–1.9 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America. Venezuela.

Digitaria villosa (Walter) Pers. *Syn. Pl.* 1: 85 (1805).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Syntherisma villosa* Walter, *Fl. Carol.* 77 (1788)

. T:<Type of Basionym>. *fide* TROPICOS and Kew Synonymy Database: HT: *Walter s.n.*, USA (BM).

Recent Synonyms: *Digitaria leucocoma* (Nash) Urb., *Symb. Antill.* 8 : 24 (1920). *D. obtusa* Swallen, *Phytologia* 4(7): 425 (1953).

Illustrations (Books): F.W.Gould, *The Grasses of Texas* (1975) (416, Fig. 223), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (174, Fig. 111), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (788).

Illustrations (Journals): *Darwiniana* (45: 109, Fig.4 (2007).

Derivation (Clifford & Bostock 2007): L. villi, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 75–150 cm long. Leaf-sheaths hirsute. Ligule an eciliate membrane. Leaf-blades 10–25 cm long, 3–6 mm wide. Leaf-blade surface glabrous to pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 2–7, borne along a central axis, unilateral, 13–25 cm long. Rhachis angular. Spikelet packing lax. Spikelets appressed, 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, dorsally compressed, 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, 0.8–0.9 length of spikelet, membranous, without keels, 5-veined. Upper glume surface pubescent, with capitate hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 7-veined, pubescent, with capitate hairs, acute. Fertile lemma elliptic, 2–2.5 mm long, cartilaginous, much thinner on margins, dark brown, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southeastern USA, Mexico. South Carolina. Gulf (Mexico), Southeast Mexico. Mesoamerica, Caribbean. Costa Rica, Guatemala. Bahamas, Cuba, Dominican Republic, Haiti, Puerto Rico. Veracruz. Chiapas.

Digitaria violascens Link. *Hort. Berol.* 1: 229 (1827).

Accepted by: R.J.Soreng et al., *Catalogue of 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), N.Tsvelev, *Grasses of the Soviet Union* (1983), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (& as *D. pertenuis*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Brazil. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Brazil:, *Herb. Link 93* (HT: B; IT: BAA-549 (fragm. ex B)).

Recent Synonyms: *Digitaria recta* D.K.Hughes, *Kew Bull.* 1923, 311 (1923).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (387, Fig. 146), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (343, Fig. 133), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (526), C-C Hsu, *Taiwan Grasses* (1975) (550, Pl. 1428), K.M.Mathew, *Flora Palni Hills* (1996) (817, Pl. 817), H.J.Noltie, *The Grasses of Bhutan* (2000) (733, Fig. 45), H.B.Gilliland, *Grasses of Malaya* (1971) (Pl. 16 & Pl. 17 as *D. pertenuis*), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (59, Fig. 51), E.E.Henty, *A Manual of the Grasses of New Guinea* (1969) (70, Pl. 24), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (443, Fig. 375), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (221), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (194(25)), 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) (373), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (172, Fig. 109), S.A.Renouze, *The Grasses of Bahia*, 1984 (250, Fig. 93), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (86, Fig. 55), L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineae* (1981–1982) (860, Fig. 176), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (191, Fig. 63), F.O.Zuloaga et al, *Flora del Paraguay* 23 (1994) (139, Fig. 40), G.Harling & C.Persson, *Flora of Ecuador* (2006) (78: 153, Fig. 18 (2006)), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (178 Fig. 29), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (551, & as *D. bogoriensis*, *D. pertenuis*, *D. thwaitesii* var. *tonkinensis*), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 765), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (1:53(1980)).

Illustrations (Journals): *Ruizia* (13:399 Fig 53h-j (1993)).

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);

Derivation (Clifford & Bostock 2007): L. *violascens*, become violet. Anthers, stigmas or glumes blue to purple.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual, mat forming. Stolons absent. Culms geniculately ascending or decumbent, 20–60 cm long. Ligule an eciliate membrane. Leaf-blades 3–25 cm long, 2–7 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)3–6(–9), digitate, unilateral, 3–14 cm long. Rhachis broadly winged, with rounded midrib. Spikelets in threes. Fertile spikelets pedicelled, 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 elliptic, dorsally compressed, 1.2–2 mm long, falling entire.

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, 3(–5) -veined. Upper glume surface puberulous or pubescent, with verruculose hairs. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 1 length of spikelet, membranous, 5–7 -veined, puberulous or pubescent, with verruculose hairs, acute. Fertile lemma elliptic, 1.2–2 mm long, cartilaginous, much thinner on margins, dark brown to black, without keel. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. *N* = 18 (4 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, East tropical Africa, Southern Africa** (*), **Western Indian ocean.** Egypt (*). Tanzania. Kwazulu-Natal. Madagascar. **Caucasus, Western Asia, China, Eastern Asia.** China South Central, Hainan, China North-Central, Qinghai, China Southeast, Tibet, Xinjiang. Japan, Kazan-retto, Nansei-Shoto, Ogosawara-shoto, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Assam, Eastern Himalaya, India, Nepal, Pakistan, Sri Lanka. Myanmar, Thailand, Vietnam. Java, Lesser Sunda Is, Malaya, Singapore,

Philippines. New Guinea PNG, or West Papua (Irian Jaya). New Guinea. **Australia, New Zealand.** Western Australia (*), Northern Territory (*), South Australia (*), Queensland (*), New South Wales (*), Lord Howe-Norfolk Is (*). New Zealand North I. **Southwestern Pacific, South-central Pacific, Northwestern Pacific, North-central Pacific.** Fiji (*), Niue (*), New Caledonia (*), Samoa (*), Tonga (*). Cook Is (*), Easter Is (*), Marquesas (*), Society Is (*). Caroline Is (*), Marianas (*). Hawaii (*). **Northeast USA, 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. Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Brazil, Southern South America.** Panama. Bermuda, Cuba, Jamaica, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North, Brazil Southeast, Brazil South. Paraguay.

TDWG4. Hebei, Shandong, Shanxi. Anhui, Fujian, Guangdong, Guangxi, Henan, Hunan, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. Darjeeling, Bhutan, Sikkim. Assam. Kerala, Karnataka. Maharashtra, Orissa, Tamilnadu, Uttah Pradesh, West Bengal. South-West. Darwin & Gulf. Southern. North, Central, South East. Coast. Misiones. Chiapas.

Digitaria wallichiana (Steud.) Stapf. Prain, *Fl. Trop. Afr.* 9: 436 (1919).

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. **Basionym or Replaced Name:** *Panicum wallichianum* Nees, *Syn. Pl. Glumac.* 1: 41 (1853)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Wight Catalog 1607 (KD 3089)*, India (P; IT: B, K, U, US-1126055 (fragm.)).

Illustrations (Books): K.M.Mathew, *Flora Palni Hills* (1996) (818, Pl 818), J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (798 & 623 as *D. remota*).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Nathaniel Wallich (1786–1854) Danish-born physician and sometime superintendent Calcutta Botanic Gardens.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 40–80 cm long. Culm-nodes pubescent. Leaf-sheaths hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 3.5 mm long, lacerate, truncate. Leaf-blades 5–20 cm long, 2–5 mm wide, flaccid. Leaf-blade surface pilose, hairy on both sides. Leaf-blade margins smooth. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 6–25, borne along a central axis, the lowest whorled, unilateral, 3–6 cm long. Central inflorescence axis 6–12 cm long. Rhachis angular, with scattered hairs or glabrous on surface, smooth on margins or scabrous on margins. Spikelet packing lax. Spikelets in pairs. Fertile spikelets pedicelled, 2 in the cluster. Pedicels present, 2–4 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or elliptic, dorsally compressed, acute, 1.5–2.25 mm long, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet. Upper glume elliptic, 0.8 length of spikelet, membranous, with hyaline margins, 3 -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 elliptic, 1 length of spikelet, membranous, 7 -veined, glabrous or puberulous, acute. Fertile lemma elliptic, 1.5–2.25 mm long, cartilaginous, much thinner on margins, light brown, shiny, without keel, 3 -veined, 0–3 -veined. Lemma margins flat, covering most of palea. Lemma apex apiculate. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp.

N = 36 (1 ref TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. **Indian Subcontinent, Malesia.** India, Sri Lanka. Java, Lesser Sunda Is.

Digitaria xanthotricha (Hack.) Stapf. Prain, *Fl. Trop. Afr.* 9: 451 (1918).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Sudan. **Basionym or Replaced Name:** *Panicum xanthotrichum* Hack., *Oesterr. Bot. Z.* 51: 333 (1901)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *G.A. Schweinfurth 2380*, 17 Sep 1869, Sudan: Djur (US-1125961).

Illustrations (Books): J.Th.Henrard, *Monograph of the genus Digitaria* (1950) (32 as *D. alba*).

Derivation (Clifford & Bostock 2007): Gk. xanthos, yellow; thrix, hair. The upper glume and sterile lemma are invested in yellow hairs.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe ANTHEPHORINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, slender, 60–100 cm long, 3–4 -noded. Culm-internodes unequal, the upper longer, terete, distally glabrous. Lateral branches lacking. Leaf-sheaths tight, mostly shorter than adjacent culm internode, glabrous on surface or hirsute, with tubercle-based hairs. Ligule a ciliate membrane, brown. Leaf-blades 2.5–5 cm long, 3–5 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–4, digitate, unilateral, 7–18 cm long. Rhachis wingless, angular, 0.4–0.5 mm wide, scabrous on margins, pubescent on margins. Spikelet packing contiguous or lax. Spikelets in pairs or in threes or clustered at each node. Fertile spikelets pedicelled, 2–4 in the cluster. Pedicels present, filiform, unequal, 0.5–3 mm long, scabrous, 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, acute, 2.5 mm long, 0.8 mm wide, falling entire.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume lanceolate, 0.9 length of spikelet, narrower than lemma, membranous, without keels, 3 -veined. Upper glume surface pubescent, hairy between veins. 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, with marginal tufts of hair or with a transverse fringe of hair, 2 hair tufts in all (and fringe), bearing yellow hairs, bearing hairs 1 mm long, acute. Fertile lemma lanceolate, 2.5 mm long, cartilaginous, much thinner on margins, pallid, without keel, 3 -veined, 0–3 -veined. Lemma surface punctate. Lemma margins flat, covering most of palea. Lemma apex acute. Palea cartilaginous.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp, oblong, plano-convex, 2 mm long. Embryo 0.4–0.5 length of caryopsis.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Sudan.

Dignathia aristata Cope. *Kew Bulletin* 46(4): 710 (1991).

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: Africa: Kenya: Mandera District, 6 km S of El Wak (2.46N, 40.56E), 420 m; 30 Apr 1978, *Gilbert & Thulin 1242* (HT: K; IT: UPS, EA).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, slender, 9–18 cm long. Lateral branches lacking or sparse. Ligule a ciliate membrane. Leaf-blades linear, 1–3 cm long, 1–2 mm wide, dark green. Leaf-blade surface scaberulous, rough abaxially.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, in a multilateral false spike, straight, unilateral, 2.5–3 cm long, 2 mm wide, bearing few fertile spikelets, bearing 3 fertile spikelets on each. Central inflorescence axis 3–8 cm long. Rhachis deciduous from axis, flattened. Raceme-bases pubescent, hairy on margins. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3 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, narrowly proportioned, laterally compressed, falling entire, deciduous with accessory branch structures.

Glumes. Glumes dissimilar, firmer than fertile lemma, gaping. Lower glume subulate, gibbous, 10–12 mm long, cartilaginous (at base), mid-green or purple. Lower glume surface scabrous, rough at apex, puberulous. Lower glume margins ciliate. Upper glume gibbous, 10–12 mm long, cartilaginous (at base), mid-green or purple. Upper glume surface scabrous, rough at apex, puberulous. Upper glume margins ciliate.

Florets. Fertile lemma elliptic or ovate, 2.5 mm long, membranous, keeled. Lemma midvein ciliate. Lemma apex acute, awned, 1 -awned. Principal lemma awn 2 mm long overall.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ellipsoid, dorsally compressed, plano-convex.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa. Kenya.

Dignathia ciliata C. E. Hubbard. *Kew Bull.* 1934, 114 (1934).

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>: *vide* TROPICOS and Kew Synonymy Database: Somalia: Fausset 46 (K holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. cilium*, eyelid; -ata, possessing. Plant hairy overall or in part.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending or decumbent, 30–60 cm long, woody. Lateral branches suffrutescent. Ligule a ciliate membrane. Leaf-blades deciduous at the ligule, involute, 3–6 cm long, 1–2 mm wide, stiff. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, exerted or embraced at base by subtending leaf. Racemes numerous, borne along a central axis, closely spaced, in a multilateral false spike, spreading, oblong, sinuous, unilateral, 0.7–0.9 cm long, bearing few fertile spikelets, bearing 1 fertile spikelets on each. Central inflorescence axis (2–)3.5–7 cm long. Rhachis deciduous from axis, flattened, villous on margins, terminating in a sterile spikelet. Spikelets in pairs. Fertile spikelets sessile.

Sterile Spikelets. Apical sterile spikelets barren, 1 in number.

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, gibbous, rostrate, 4.5–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, firmer than fertile lemma, recurved at apex. Lower glume lanceolate, gibbous, 4.5–7 mm long, 1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume primary vein tuberculate, ciliate. Lower glume lateral veins absent. Lower glume surface glabrous. Lower glume margins ciliolate. Lower glume hairs 1.5–2 mm long. Lower glume apex caudate, awned, 1 -awned, awn 1–1.5 mm long, awn ciliolate. Upper glume lanceolate, gibbous, 4.5–7 mm long, 1 length of adjacent fertile lemma, indurate, with hyaline margins, 1-keeled. Upper glume primary vein tuberculate, ciliate. Upper glume surface glabrous. Upper glume margins ciliolate. Upper glume hairs 1.5–2 mm long. Upper glume apex caudate, awned, 1 -awned, awn 1–1.5 mm long, awn hispidulous.

Florets. Fertile lemma ovate, gibbous, 4–6 mm long, cartilaginous, keeled, 3 -veined, 0–3 -veined. Lemma midvein ciliate, hairy all along. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 1 mm long overall. Palea 2 -veined.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Ethiopia (inc. Eritrea), Somalia.

Dignathia gracilis Stapf. *Hook. Ic. Pl. t.* 2950 (1911).

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: Kenya, Tanaland: Linton 203 (K syn) ; Kenya, Ribe: Wakefield 24 (K syn).

Illustrations (Books): R.M.Polhill, F.T.E.A., *Gramineae* (2(1974):405, Fig 110), G.V.Pope et al., *Flora Zambesiaca* 10, T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (215, Fig 121).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.2950 (1911)).

Derivation (Clifford & Bostock 2007): *L. slender*. Culms or inflorescences slender.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 20–50 cm long, wiry. Ligule a ciliate membrane. Leaf-blades 2–9 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, in a multilateral false spike, oblong, sinuous, unilateral, 0.3–0.6 cm long, bearing few fertile spikelets, bearing (1–)2 fertile spikelets on each. Central inflorescence axis 3–8 cm long. Rhachis deciduous from axis, flattened, terminating in a sterile spikelet. Raceme-bases cuneate, 2 mm long, pilose, hairy on margins. Spikelets solitary or in pairs. Fertile spikelets sessile, 1–2 in the cluster, subequal.

Sterile Spikelets. Apical sterile spikelets rudimentary, 1 in number.

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 orbicular, laterally compressed, 2–3.5 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, gibbous, 2–2.5 mm long, 0.7–1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume primary vein ciliolate. Lower glume lateral veins absent. Lower glume surface scabrous. Lower glume margins ciliolate. Lower glume apex acute. Upper glume orbicular, gibbous, 2–3.5 mm long, 1.1–1.7 length of adjacent fertile lemma, indurate, with hyaline margins, 1-keeled. Upper glume primary vein ciliolate. Upper glume surface scabrous. Upper glume margins ciliolate. Upper glume apex caudate.

Florets. Fertile lemma ovate, 1.5–2 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein ciliolate. Lemma surface glabrous or puberulous. Lemma apex acute, mucronate. Palea 2 -veined.

Flower and Fruit. Anthers 3, 1 mm long. Caryopsis with adherent pericarp, ellipsoid, dorsally compressed, plano-convex, 1.5 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa, South tropical Africa. Somalia. Kenya, Tanzania. Mozambique.

Dignathia hirtella Stapf. *Hook. Ic. Pl. t.* 2950 (1911).

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: Kenya: Linton 4 (K holotype).

Illustrations (Books): S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (179, Fig 74).

Derivation (Clifford & Bostock 2007): *L. hirtus*, hairy; -ellus, diminutive. Plants with slightly hairy leaves or spikelets.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 10–25 cm long, wiry. Ligule a ciliate membrane. Leaf-blades 1–6 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, in a multilateral false spike, oblong, sinuous, unilateral, 0.5–0.9 cm long, bearing few fertile spikelets, bearing (1–)2 fertile spikelets on each. Central inflorescence axis 2–5 cm long. Rhachis deciduous from axis, flattened, terminating in a sterile spikelet. Raceme-bases cuneate, 2 mm long, pilose, hairy on margins. Spikelets solitary or in pairs. Fertile spikelets sessile, 1–2 in the cluster, subequal.

Sterile Spikelets. Apical sterile spikelets rudimentary, 1 in number.

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 orbicular, laterally compressed, gibbous, rostrate, 5–7 mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, gibbous, 5–6 mm long, 0.8–1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface pubescent. Lower glume margins ciliate. Lower glume apex acute. Upper glume orbicular, gibbous, 5–7 mm long, 1.2–1.5 length of adjacent fertile lemma, indurate, with hyaline margins, 1-keeled. Upper glume surface pubescent. Upper glume margins ciliate. Upper glume apex caudate.

Florets. Fertile lemma ovate, 4–5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma surface pubescent. Lemma apex acute, mucronate. Palea 2 -veined.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp, ellipsoid, dorsally compressed, plano-convex.

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Ethiopia (inc. Eritrea), Somalia. Kenya. **Arabian Peninsula.** Oman, Yemen. **Indian Subcontinent.** India.

TDWG4. Gujarat. Rajasthan.

Dignathia villosa C. E. Hubbard. *Kew Bull.* 1936, 293 (1936).

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: Fausset (K holotype) ; British Somaliland: without precise locality, *G. Fausset s.n.*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. villi, long weak hairs; -osa, abundance. The plant in whole or in part covered with long hairs.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending or decumbent, 5–20(–25) cm long, woody. Lateral branches ample. Ligule a ciliate membrane. Leaf-blades deciduous at the ligule, 2–4 cm long, 1–2 mm wide, stiff. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Racemes numerous, borne along a central axis, closely spaced, in a multilateral false spike, spreading, oblong, sinuous, unilateral, 0.4–0.6 cm long, bearing few fertile spikelets, bearing 1–2 fertile spikelets on each. Central inflorescence axis 1.5–2.5 cm long. Rhachis deciduous from axis, flattened, terminating in a sterile spikelet. Spikelets in pairs or in threes. Fertile spikelets sessile.

Sterile Spikelets. Apical sterile spikelets barren, 1 in number.

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, gibbous, rostrate, 4–5.5(–7) mm long, falling entire, deciduous with accessory branch structures.

Glumes. Glumes similar, exceeding apex of florets, firmer than fertile lemma, recurved at apex. Lower glume lanceolate, gibbous, 4–7 mm long, 1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface villous, hairy generally, with tubercle-based hairs. Lower glume apex acuminate. Upper glume lanceolate, gibbous, 4–7 mm long, 1 length of adjacent fertile lemma, indurate, with hyaline margins, 1-keeled. Upper glume surface villous, hairy generally, with tubercle-based hairs. Upper glume apex acuminate.

Florets. Fertile lemma ovate, gibbous, 4–6 mm long, cartilaginous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma apex acuminate, mucronate. Palea 2 -veined.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa. Ethiopia (inc. Eritrea), Somalia.

Diheteropogon amplexens (Nees) W. D. Clayton. *Kew Bull.* 20: 75 (1966).

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:** *Andropogon amplexens* Nees, *Fl. Afr. Austral. Ill.* 104–105 (1841)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Drhge s.n.*, South Africa (CGE?; IT: MO).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (as *Andropogon amplexens*), R.M.Polhill, F.T.E.A., *Gramineae* (3(1982):785, Fig 182), G.V.Pope et al., *Flora Zambesiaca* 10 (as var. *amplexens*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (Plt. 21as *Andropogon*), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (115, Fig 68), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (318, Fig 128).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. amplexo, encircle. Leaf-blades more or less heart-shaped.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial. Cataphylls evident. Rhizomes short. Culms 30–100 cm long. Ligule an eciliate membrane. Leaf-blade base simple or broadly rounded or cordate. Leaf-blades flat or convolute, 15–30 cm long, 2–25 mm wide. Leaf-blade apex attenuate, filiform.

Inflorescence. Synflorescence compound, scanty.

Inflorescence composed of racemes, terminal and axillary, subtended by a spatheole. Spatheole lanceolate, 7–8 cm long, herbaceous. Racemes 2, paired, 5–14(–17) cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear. Rhachis internode tip crateriform, with simple rim. Raceme-bases filiform. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number (lower raceme), 0 in upper racemes, equalling fertile.

Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 9–13 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes herbaceous, wingless, muticous or awned, one glume awned, with 0–8 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets linear, dorsally compressed, 6–9 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 1–2 mm long, pilose, base pungent, inserted.

Glumes. Glumes dissimilar, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally, keeled obtusely. Lower glume lateral veins several in each keel. Lower glume surface with a longitudinal median groove or deeply depressed. Lower glume apex dentate, 2 -fid. Upper glume 3 -veined. Upper glume margins ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline, 2 -veined, ciliate on margins. Fertile lemma linear, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliate, hairy above. Lemma apex dentate, 2 -fid, incised 0.2 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, bigenulate, 25–70 mm long overall, with twisted column. Column of lemma awn hispidulous or pubescent. Palea hyaline, 2 -veined. Palea keels ciliate.

Flower and Fruit. $N = 10$ (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, Ivory Coast, Nigeria, Senegal. DRC. Ethiopia (inc. Eritrea), Sudan. Kenya, Tanzania. Angola, Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Northern Cape, Eastern Cape.

Diheteropogon filifolius (Nees) W. D. Clayton. *Kew Bull.* 20: 75 (1966).

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:** *Heteropogon filifolius* Nees, *Fl. Afr. Austr.* 102 (1841). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: South Africa, Uitenhage: Drege (K isosyn) ; South Africa, Olifantshoek: Ecklon.

Recent Synonyms: *Diheteropogon grandiflorus* (Hack.) Stapf, *Hook. Ic. Pl. t.* 3093 (1922).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (303, Fig. 241 as *D. maximus*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (498, Fig. 401, as *Andropogon*).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3093 (1922) as *D. grandiflorus*).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999).

Derivation (Clifford & Bostock 2007): L. filum, thread; folium, leaf. Leaf-blades very narrow.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths or fibrous dead sheaths. Culms 15–23 cm long. Ligule an eciliate membrane. Leaf-blades filiform or linear, flat or involute, 10–50 cm long, 0.5–6(–16) mm wide.

Inflorescence. Synflorescence simple or compound, scanty.

Inflorescence composed of racemes, terminal or terminal and axillary, subtended by a spatheole. Spatheole lanceolate, herbaceous. Racemes 2, paired, 2.5–14(–17) cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear or clavate. Rhachis internode tip crateriform, with simple rim. Raceme-bases filiform or linear. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2–22 in number (lower raceme), 0 in upper racemes or 6–22 in upper racemes, sessile and pedicelled, equalling fertile.

Companion sterile spikelets well-developed, male, lanceolate, dorsally compressed, 12–25 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes herbaceous, wingless or winged on keels, distinctly veined, muticous or awned, one glume awned, with 0–8 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets linear, subterete or dorsally compressed, 6–15 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus linear, 2.5–5 mm long, pubescent, base pungent, inserted.

Glumes. Glumes dissimilar, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally, keeled sharply or obtusely. Lower glume lateral veins dissociated from keel or several in each keel, intercarinal veins absent. Lower glume surface concave or with a longitudinal median groove or deeply depressed. Upper glume linear, 3 -veined. Upper glume margins ciliate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline, 2 -veined, ciliate on margins. Fertile lemma linear or oblong, hyaline, without keel, 3 -veined, 0–3 -veined. Lemma margins ciliate, hairy above. Lemma apex lobed, 2 -fid, incised 0.66 of lemma length, awned, 1 -awned.

Principal lemma awn from a sinus, bigeniculate, 30–70(–150) mm long overall, with twisted column. Column of lemma awn puberulous. Palea present or absent or minute, hyaline, 2 -veined. Palea keels ciliolate.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, East tropical Africa, South tropical Africa, Southern Africa. Nigeria. Gabon, DRC. Tanzania. Angola, Mozambique, Zambia, Zimbabwe. Namibia, Limpopo, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Lesotho, Eastern Cape.

Diheteropogon hagerupii Hitchcock. *Proc. Biol. Soc. Wash.* 43: 89 (1930).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Niger. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Hagerup* 401, 24 Sep 1927, Niger: in a dry locality at Bara near Ansong (US-1445573).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Olaf Hagerup (1889–1961) Danish botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 100–150 cm long. Ligule an eciliate membrane. Leaf-blade base cordate or amplexicaul. Leaf-blades 5–20 cm long, 5–20 mm wide.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 2, paired, 2–6 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes linear. Rhachis internode tip crateriform, with simple rim. Raceme-bases linear. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, linear, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number (lower raceme), 0 in upper racemes, sessile and pedicelled, equalling fertile.

Companion sterile spikelets well-developed, male, linear or lanceolate, dorsally compressed, 7–12 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes chartaceous, keeled, wingless, distinctly veined, awned, one glume awned, with 1–12 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 6–10 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–3 mm long, pilose, base pungent, inserted.

Glumes. Glumes dissimilar, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally, keeled obtusely. Lower glume lateral veins several in each keel (3 in each), intercarinal veins absent. Lower glume surface with a longitudinal median groove or deeply depressed. Upper glume lanceolate, 3 -veined. Upper glume surface pubescent.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret hyaline. Fertile lemma oblong, 4.5 mm long, membranous, without keel, 3 -veined, 0–3 -veined. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, bigeniculate, 60–110 mm long overall, with twisted column. Column of lemma awn hirtellous, with 0.5 mm long hairs. Palea absent or minute.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa. Ghana, Guinea, Ivory Coast, Mali, Mauritania, Nigeria, Senegal.

Diheteropogon microterus W. D. Clayton. *Kew Bull.* 21: 485 (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: HT: *L.D.E.F. Vesey-Fitzgerald* 4123, 20 Apr 1963, Zambia (K; IT: US-2640015).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. mikros, small; pteron, wing. Lower glume two-keeled.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ANDROPOGONINAE.

Habit, Vegetative Morphology. Annual. Culms slender, 30–45 cm long. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades 5–15 cm long, 1–2 mm wide.

Inflorescence. Inflorescence composed of racemes, terminal. Racemes (1–)2, paired, 4–6 cm long. Rhachis fragile at the nodes, ciliate on margins. Rhachis internodes clavate, 3 mm long. Rhachis internode tip

crateriform, with simple rim. Raceme-bases linear, 3 mm long. Spikelets in pairs. Fertile spikelets sessile, 1 in the cluster. Companion sterile spikelets pedicelled, 1 in the cluster. Pedicels present, clavate, ciliate.

Sterile Spikelets. Basal sterile spikelets well-developed, 2 in number (lower raceme), 0 in upper racemes, sessile and pedicelled, equalling fertile.

Companion sterile spikelets well-developed, containing empty lemmas, lanceolate, dorsally compressed, 4.5–6 mm long, longer than fertile, deciduous with the fertile. Companion sterile spikelet glumes herbaceous, keeled, wingless, awned, one glume awned, with 2 mm long awn. Companion sterile spikelet lemmas 2, enclosed by glumes.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, dorsally compressed, 5–6 mm long, falling entire, deciduous with accessory branch structures. Spikelet callus cuneate, 1–2 mm long, pilose, base pungent, inserted.

Glumes. Glumes dissimilar, firmer than fertile lemma. Lower glume lanceolate, 1 length of spikelet, coriaceous, 2-keeled, keeled dorsally, keeled sharply or obtusely. Lower glume lateral veins several in each keel (1–2 in each), intercarinal veins absent. Lower glume surface with a longitudinal median groove or deeply depressed. Upper glume lanceolate, 3 -veined. Upper glume margins ciliolate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret elliptic, 3 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliolate on margins. Fertile lemma oblong, 3 mm long, hyaline, without keel. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, bigenulate, 35–45 mm long overall, with twisted column. Column of lemma awn puberulous. Palea absent or minute.

Flower and Fruit. Anthers 3, 1–1.5 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. South tropical Africa. Zambia.

Dilophotriche occidentalis Jacques-Felix. *Journ. Agric. Trop. & Bot. Appliq.* 7: 408 (1960).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guinea. **Basionym or Replaced Name:** *Loudetiopsis occidentalis* (Jacques-Felix) Clayton, *Kew Bull.* 21: 123 (1967). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Guinea, Kindia: Jacques-Felix 1852.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. occident, west; -ale, pertaining to. From the western states of the United States.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–90 cm long. Ligule a fringe of hairs. Leaf-blades 3–6 cm long, 2–4 mm wide. Leaf-blade margins cartilaginous.

Inflorescence. Inflorescence a panicle. Panicle open, elliptic, 6–10 cm long. Panicle branches capillary. Spikelets in pairs or in threes. Fertile spikelets pedicelled, 2–3 in the cluster, subequal. Pedicels present, free, filiform, unequal, 5–25 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate, laterally compressed, 6–10 mm long, falling entire, deciduous with the pedicel, readily shedding fertile florets, pedicel base hooked. Floret callus elongated, 1 mm long, pubescent, truncate.

Glumes. Glumes similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–6 mm long, 0.5–0.66 length of spikelet, chartaceous, dark brown, without keels, 3 -veined. Lower glume surface hispid, hairy on veins, with tubercle-based hairs. Lower glume apex acute. Upper glume lanceolate, 6–10 mm long, 1 length of spikelet, chartaceous, dark brown, without keels, 3 -veined. Upper glume surface hispid, hairy on veins, 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, lanceolate, 6–10 mm long, 1 length of spikelet, chartaceous, 3 -veined, acuminate. Fertile lemma oblong, 4.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts, bearing 2 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, incised 0.25 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 15–18 mm long overall, with twisted column, deciduous, abscissing from top of lemma. Lateral lemma awns present, arising on apex of lobes, 5–6 mm long, shorter than principal. Palea 2 -veined. Palea keels contiguous above a sulcus, thickened.

Flower and Fruit. Anthers 3, 2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Guinea.

Dilophotriche pobeguinii Jacques-Felix. *Journ. Agric. Trop. & Bot. Appliq.* 7: 408 (1960).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Guinea. **Basionym or Replaced Name:** *Loudetiopsis pobeguinii* (Jacques-Felix) Clayton, *Kew Bull.* 21: 123 (1967). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Guinea, Fouta Djallon: Pobeguini 2035.

Illustrations (Books): G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990).

Derivation (Clifford & Bostock 2007): in honor of Charles Henri Oliver Pobeguini (1856–1951) French botanist.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Annual, caespitose. Culms 30–60 cm long. Ligule a fringe of hairs. Leaf-blades 6–10 cm long, 3–5 mm wide.

Inflorescence. Inflorescence a panicle, comprising 120–200 fertile spikelets (or more). Panicle open, elliptic, 15–25 cm long. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster, subequal. Pedicels present, free, filiform, subequal, 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 lanceolate, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, truncate.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3–3.5 mm long, 0.6–0.7 length of spikelet, chartaceous, dark brown, without keels, 3 -veined. Lower glume surface setose, hairy on veins, with tubercle-based hairs. Lower glume apex acute. Upper glume lanceolate, 5 mm long, 1 length of spikelet, chartaceous, dark brown, without keels, 3 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate, 5 mm long, 1 length of spikelet, chartaceous, 3 -veined, puberulous, acuminate. Fertile lemma lanceolate, 4 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts, bearing 2 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 10–16 mm long overall, with twisted column, deciduous, abscising from top of lemma. Lateral lemma awns present, arising on apex of lobes, 4–5 mm long, shorter than principal. Palea 2 -veined. Palea keels approximate.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Guinea-Bissau, Guinea, Senegal.

Dilophotriche tristachyoides (Trin.) Jacques-Felix. *Journ. Agric. Trop. & Bot. Appliq.* 7: 408 (1960).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sierra Leone. **Basionym or Replaced Name:** *Panicum tristachyoides* Trin., *Bull. Sc. Acad. Petersb.* 1: 71 (1836). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sierra Leone: Coll?.

Recent Synonyms: *Loudetiopsis tristachyoides* (Trin.) Conert, *Engl. Bot. Jahrb.* 77: 291 (1957).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (162, Fig. 87).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Similar to *Tristachys*.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–120 cm long. Ligule a fringe of hairs. Leaf-blades 5–20 cm long, 4–9 mm wide.

Inflorescence. Inflorescence a panicle, comprising 12–100 fertile spikelets. Panicle open, oblong, 5–12 cm long. Primary panicle branches simple. Panicle branches capillary, flexuous, hispid, with tubercle-based hairs. Spikelets in threes. Fertile spikelets pedicelled, 3 in the cluster, subequal. Pedicels present, free, filiform, subequal, 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, laterally compressed, 6–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1 mm long, pilose, with longer hairs above, truncate.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4–11 mm long, 0.6–0.9 length of spikelet, chartaceous, dark brown, without keels, 3 -veined. Lower glume surface hispid, hairy on veins, with tubercle-based hairs. Lower glume apex acute. Upper glume lanceolate, 6–12 mm long, 1 length of spikelet, chartaceous, dark brown, without keels, 3 -veined. Upper glume surface hispid, hairy on veins, with tubercle-based hairs. Upper glume apex acuminate.

Florets. Basal sterile florets 1, male, with palea, separately deciduous. Lemma of lower sterile floret similar to upper glume, lanceolate to oblong, 6–12 mm long, 1 length of spikelet, chartaceous, 3 -veined, acuminate. Fertile lemma oblong, 3–3.5 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts, bearing 2 hair tufts in all. Lemma margins involute, interlocking with palea keels. Lemma apex lobed, 2 -fid, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 15–30 mm long overall, with twisted column, deciduous, abscising from top of lemma. Column of lemma awn 5–8 mm long. Lateral lemma awns present, arising on apex of lobes, 4–8 mm long, shorter than principal. Palea 2 -veined. Palea keels approximate, winged, narrowly winged.

Flower and Fruit. Anthers 3, 2–3 mm long. Ovary glabrous. Caryopsis with adherent pericarp, obovoid, 2 mm long, glabrous. Hilum linear.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa. Burkina, Guinea, Mali, Senegal.

Dimeria acinaciformis R. Br. *Prod.* 204. (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: Littora Novae Hollandiae intra tropicum,.

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): *L. acinaces*, short sword; forma, appearance. Lemma the shape of a short Persian sword.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms 10–40 cm long. Culm-nodes pubescent. Lateral branches sparse. Leaf-sheaths keeled, glabrous on surface. Ligule an eciliate membrane. Leaf-blades 2–4 cm long, 1.5–2 mm wide. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–4 cm long. Rhachis angular, 0.5 mm wide, scabrous on margins, glabrous on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, compressed strongly, 5 mm long, falling entire. Spikelet callus oblong, 0.5–1 mm long, pilose, base obtuse. Spikelet callus hairs 0.5–1 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, 3 -veined. Lower glume primary vein scabrous, eciliate. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume lanceolate, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged above, 3 -veined. Upper glume primary vein ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, 0 -veined, without midvein, without lateral veins, ciliate on margins, obtuse. Fertile lemma elliptic, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.7 mm long.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Northern Territory, Queensland.

TDWG4. Darwin & Gulf. North.

Dimeria agasthyamalayana Kiran Raj & Ravi. *Rheedea* 11(2): 93 (2001).

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, Kerala, Agasthyamala Hills: Raj 41939 (TBGT holo, CAL, CALI, K, MH).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms slender, 20–40 cm long. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths 6–11 cm long, keeled, glabrous on surface. Ligule a ciliate membrane, 1.25 mm long, truncate or obtuse. Leaf-blades linear or lanceolate, 9–18 cm long, 3–5 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade surface glabrous, hairless throughout or except near base. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 5–9 cm long. Rhachis narrowly winged, angular, 0.75 mm wide, scaberulous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 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 oblong, laterally compressed, compressed strongly, 4–5 mm long, falling entire. Spikelet callus 0.3–0.4 mm long, pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged near apex. Lower glume primary vein scabrous. Lower glume surface glabrous. Lower glume apex acute. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged all along. Upper glume margins scabrous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5–3 mm long, hyaline, 1 -veined, without lateral veins, ciliate on margins. Fertile lemma elliptic, 3–3.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight, 2.5–8 mm long overall, with twisted column. Palea absent or minute.

Flower and Fruit. Lodicules 2. Anthers 2, 1–1.5 mm long. Caryopsis with adherent pericarp, oblong, 2–2.5 mm long.

Distribution (TDWG), Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Kerala.

Dimeria aristata (Hackel) Senaratna. *Grasses Ceylon* :163 (1956).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Dimeria lehmannii* var. *aristata* Hack., *DC., Monogr. Phan.* 6:83 (1889). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sri Lanka: Thwaites CP952 (K iso).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. arista, bristle; -ata, possessing. The apices of lemmas, paleas or glumes drawn out into a distinct awn.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending, 30–60 cm long. Ligule an eciliate membrane. Leaf-blades 7–15 cm long, 2–4 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, sinuous, unilateral, 4–8 cm long. Rhachis angular, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 3.5–4 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3 -veined. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged near apex (as a crest) or all along, 3 -veined. Upper glume primary vein ciliate. Upper glume surface glabrous or pilose. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma elliptic, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid,

awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Sri Lanka.

Dimeria avenacea (Retz.) C. E. C. Fischer. *Kew Bull.* 1932, 72 (1932).

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 India. **Basionym or Replaced Name:** *Anthoxanthum avenaceum* Retz., *Obs.* 3, 8. (1783). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Retzius (LD holo).

Recent Synonyms: *Dimeria acutipes* Bor, *Kew Bull.* 1952, 560 (1952).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141 & 143 as *D. acutipes*), K.M.Mathew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (pl.758 as *D. acutipes*).

Derivation (Clifford & Bostock 2007): L. -acea, resembling. With inflorescences and/or spikelets similar to those of *Avena*.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 8–30 cm long. Ligule an eciliate membrane. Leaf-blades 1–9 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, unilateral, 1–5 cm long. Rhachis angular, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 4–7 mm long, falling entire. Spikelet callus cuneate, 1–1.5 mm long, pubescent, base acute.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3 -veined. Lower glume primary vein eciliate. Lower glume surface glabrous or pilose. Lower glume apex acuminate. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, wingless or winged on keel, winged all along, 3 -veined. Upper glume primary vein eciliate. Upper glume apex acuminate, awned, 1 -awned, awn 1.5–4 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma elliptic, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–15 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India, Sri Lanka.

TDWG4. Orissa, Tamilnadu.

Dimeria balakrishnaniana K. Ravikumar, P.V. Sreekumar & V. Lakshmanan. *Kew Bull.*, 45(3): 573 (1990).

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: Tamil Nadu: Madurai District: High Wavy's Mountains, Nursery Valley, ca. 1600 m. 22 Jan. 1988., *Lakshmanan 87543* (HT: CAL; IT: K, MH).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 12–25 cm long. Culm-nodes bearded. Leaf-sheaths 2–3.5 cm long, keeled, pubescent. Ligule a ciliolate membrane, 1 mm long. Leaf-blades linear or lanceolate, 4–6.7 cm long, 2–5 mm wide. Leaf-blade midrib conspicuous. Leaf-blade surface pubescent. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1(–2), single, unilateral, 2–4 cm long. Rhachis flattened, 1.5 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, compressed strongly, 4–5 mm long, falling entire. Spikelet callus pilose, base obtuse. Spikelet callus hairs 1–1.5 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate or oblong, 4–4.5 mm long, 0.9 length of spikelet, chartaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume apex acuminate. Upper glume lanceolate or ovate, 4.5–5 mm long, 1 length of spikelet, coriaceous, 1-keeled, winged on keel. Upper glume surface asperulous, rough above. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or elliptic, 2–2.5 mm long, hyaline, 1 -veined, with obscure midvein, without lateral veins, ciliate on margins, fringed above, acute. Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn 3–4 mm long, glabrous.

Flower and Fruit. Anthers 2, 1–1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.
Tamilnadu.

Dimeria ballardii Bor. *Kew Bull.* 584 (1952).

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: Sri Lanka, Kudu Oya: Ballard 1290 (K holo).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): in honor of F. Ballard who collected in Sri Lanka.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, mat forming. Culms 25–50 cm long. Leaves cauline. Ligule an eciliate membrane. Leaf-blades 3–10 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, sinuous, unilateral, 3–7 cm long. Rhachis angular, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 1–1.5(–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, laterally compressed, compressed strongly, 5.5–7.5 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged all along, 3 -veined. Lower glume primary vein scabrous, eciliate. Lower glume apex acute. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along, 3 -veined. Upper glume primary vein scabrous, eciliate. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 4 mm long, hyaline, ciliolate on margins. Fertile lemma elliptic, 4.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–11 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Sri Lanka.

Dimeria bialata C. E. C. Fischer. *Kew Bull.* 1933, 351 (1933).

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>: *vide* TROPICOS and Kew Synonymy Database: Ind. Or. Madras state. S. Kanara District at Siradi, Nov., ..., *A. Meebold 10548*.

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): L. bis, twice; ala, wing; -ata, possessing. The keels of both glumes narrowly winged.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms slender, 10–45 cm long, 6-noded. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades erect, 2.5–7 cm long, 2.5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scabrous, rough on both sides, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous, tuberculate-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, ascending (divergent), straight, unilateral, 2.5–3.5 cm long. Rhachis flattened, 1–1.25 mm wide, scabrous on margins, glabrous on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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 strongly, 3.5–4 mm long, falling entire. Spikelet callus 0.3 mm long, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 3–3.25 mm long, 0.9 length of spikelet, coriaceous, much thinner on margins, 1-keeled, winged on keel, winged narrowly. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume elliptic, 3.5 mm long, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline, ciliolate on margins. Fertile lemma elliptic, 2.5 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, 9–11 mm long overall, with twisted column. Column of lemma awn 2.5–4 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. India.

TDWG4. Kerala. Tamilnadu.

Dimeria blatteri Bor. *Kew Bull.* 1949, 70 (1949).

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 India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Bombay: Khandala, Echo Point, Oct. 1918, *Blatter & McCann s.n.* (HT: Herb. Blatter, St. Xavier's College, Bombay).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143, Fig 4).

Derivation (Clifford & Bostock 2007): in honor of Ethelbert Blatter (1887–1934) Swiss-born cleric and Indian botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms 30–60 cm long. Culm-nodes bearded. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1.5 mm long. Leaf-blades 7–15 cm long, 2–4 mm wide, flaccid. Leaf-blade midrib prominent beneath. Leaf-blade surface scaberulous, rough on both sides, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scaberulous, tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 4–8 cm long. Rhachis subterete, glabrous on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.25 mm long, villous, 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 linear, laterally compressed, compressed strongly, 8–12 mm long, falling entire. Spikelet callus oblong, 1.2 mm long, pubescent, base acute.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 6–8 mm long, 0.66–0.75 length of spikelet, coriaceous, much thinner on margins, 1-keeled. Lower glume surface pubescent, hairy below. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, coriaceous, with hyaline margins, without keels, winged on keel, winged near apex. Upper glume surface pilose, hairy at apex or below. Upper glume apex acute, awned, 1-awned, awn 1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 6 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 8 mm long, hyaline, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex dentate, 2-fid, with lobes 2 mm long, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 28 mm long overall, with twisted column. Column of lemma awn 8 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 3.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Indian Subcontinent. India.
TDWG4. Maharashtra.

Dimeria borii Sreek., V.J. Nair & N.C. Nair. *J. Econ. Taxon. Bot.* 3(2): 657 (1982).

Not on *GrassBase*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Norman Loftus Bor (1893–1972) Irish-born Indian forest botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.
Kerala.

Dimeria chelariensis N. Ravi. *Rheedea*, 5(1): 37 (1995).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: N. Ravi 3606, 28 Nov 1992, India: Kerala: Calicut, 25 m (L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ensis*, denoting origin. From Chelari, Kerala State, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial. Culms decumbent, slender, rooting from lower nodes. Culm-nodes bearded. Leaf-sheaths 4.5 cm long, keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–1 mm long, obtuse. Leaf-blades linear or lanceolate, 7–15 cm long, 2–3.5 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 2–4, paired or digitate, sinuous, unilateral, 5–7 cm long. Rhachis narrowly winged, angular, 0.25–0.5 mm wide, scabrous on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.25 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 strongly, 2.5–3 mm long, falling entire. Spikelet callus square, 0.25 mm long, pubescent, base obtuse. Spikelet callus hairs 0.5 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged near apex. Lower glume primary vein scabrous. Lower glume surface asperulous. Lower glume apex attenuate. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged near apex. Upper glume primary vein scabrous, ciliate. Upper glume margins ciliate. Upper glume apex attenuate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5–1.75 mm long, hyaline, 2-veined, ciliolate on margins, fringed above, acute. Fertile lemma oblanceolate, 2 mm long, without keel, 0–3-veined. Lemma margins ciliolate, hairy above. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Palea 0.4 mm long.

Flower and Fruit. Lodicules 2, cuneate. Anthers 2, 1.5 mm long. Caryopsis with adherent pericarp, oblong, 1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.
Kerala.

Dimeria chloridiformis (Gaud.) K. Schum. & Lauterb. *Fl. Deutsch. Sudsee*, 165 (1901).

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*), W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Guam. **Basionym or Replaced Name:** *Andropogon chloridiformis* Gaudich., *Voy. Uranie* 412 (1826). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: M.C. Gaudichaud s.n., Guam.

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Derivation (Clifford & Bostock 2007): L. forma, appearance. With inflorescences resembling those of certain *Chloris* species.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial. Culms erect, 60–90 cm long. Leaf-sheaths hirsute. Ligule a ciliolate membrane. Leaf-blades 10–15 cm long, 5 mm wide. Leaf-blade surface hirsute, densely hairy, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 3–6, paired, unilateral, 9–11 cm long. Rhachis flattened, 0.7 mm wide, pilose on surface, ciliate on margins. Spikelet packing 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 oblong, laterally compressed, compressed strongly, 4 mm long, falling entire. Spikelet callus 0.2 mm long, base truncate.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 4 mm long, 0.9 length of spikelet, chartaceous, much thinner on margins, 1-keeled. Lower glume primary vein ciliate. Lower glume margins ciliate. Lower glume hairs 0.7–1 mm long. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, chartaceous or coriaceous, with hyaline margins, 1-keeled, wingless. Upper glume primary vein ciliate. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear, 2.5 mm long, hyaline, ciliolate on margins. Fertile lemma obovate, 2.5 mm long, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia, Australasia, Pacific.

Country /Province /State. **Malesia.** Malaya, Philippines. New Guinea PNG. New Guinea. **Australia.** Northern Territory, Queensland. **Northwestern Pacific.** Caroline Is, Marianas.

TDWG4. Darwin & Gulf. North.

Dimeria ciliata Merrill. *Philipp. Journ. Sc., Bot.* 9: 262 (1914).

Regarded by K as a synonym (*D. chloridiformis*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Philippines. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: IT: *E.D. Merrill* 9320, 28 May 1913, Philippines: Palawan Island, Palawan Prov. (K (photo, BRI), US-734750).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. cilium, eyelid; -ata, possessing. Plant hairy overall or in part.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial. Culms 40–80 cm long. Culm-nodes black. Leaf-sheaths 5 cm long, glabrous on surface, outer margin glabrous or hairy. Ligule an eciliate membrane, 0.8 mm long. Leaf-blades 10–20 cm long, 4–8 mm wide. Leaf-blade surface pilose, hairy abaxially, with tubercle-based hairs. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 10–15 cm long. Rhachis flattened, 1 mm wide, ciliate on margins. Spikelet packing 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 oblong, laterally compressed, compressed strongly, 4.5–5.5 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume margins ciliate. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged above. Upper glume apex emarginate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3.2 mm long, hyaline, ciliolate on margins. Fertile lemma elliptic, 4.2 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 17 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 2.2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia, Papuaasia. Thailand. Malaya, Philippines. New Guinea.

Dimeria connivens Hack. *DC. Monog. Phan.* 6: 689 (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: India orientalis, loco speciali collectoreque ignoto, *T. Anderson s.n.* (HT: ?).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143, Fig 4).

Derivation (Clifford & Bostock 2007): *L. conniveo*, let pass unnoticed. Overlooked by previous workers.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, 10–25 cm long. Culm-nodes bearded. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5–0.9 mm long. Leaf-blades linear or lanceolate, 2.5 cm long, 2 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous, hairless except near base. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, ascending, unilateral, 2–4 cm long. Rhachis narrowly winged, angular, 0.75 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 3.5 mm long, falling entire. Spikelet callus bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 3 mm long, 0.9 length of spikelet, coriaceous, much thinner on margins, 1-keeled, keeled above. Lower glume surface pubescent. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 1.5–2 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 2.5 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, 9 mm long overall, with twisted column. Column of lemma awn 3 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.6 mm long. Caryopsis linear, isodiametric, 2 mm long. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Bihar, Kerala. Orissa.

Dimeria copeana P.V. Sreekumar, V.J. Nair & N.C. Nair. *J. Bombay Nat. Hist. Soc.*, 78(3): 577 (1981).

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, Thrikkunnapuzha: Sreekumar 66736 (CAL holo, K, MH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -ana*, indicating connection. In honor of Thomas Arthur Cope (1949-) English botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Butt sheaths glabrous or pilose. Culms slender, 20–45 cm long. Culm-nodes bearded. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule a ciliolate membrane. Leaf-blades 20–40 cm long, 1–2 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, appressed, unilateral, 8–10 cm long. Rhachis narrowly winged, angular, 0.25–0.5 mm wide, scaberulous on margins, glabrous on margins. Spikelet packing crowded. 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 oblanceolate, laterally compressed, compressed strongly, 3.5–4.5 mm long, falling entire. Spikelet callus cuneate, 0.25–0.5 mm long, pubescent.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 3–4 mm long, 0.8–0.9 length of spikelet, coriaceous, 1-keeled. Lower glume surface scabrous. Lower glume apex acute. Upper glume elliptic, 3.5–4.5 mm long, 1 length of spikelet, coriaceous, with hyaline margins, without keels, wingless. Upper glume surface scabrous, villous. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins, fringed above. Fertile lemma oblong, 3–3.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 2 mm long. Caryopsis with adherent pericarp, oblong, 2.25 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria copei N. Ravi. *Blumea*, 41(1): 251 (1996).

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, Kerala, Kalavoor: Ravi 3655 (TBGT holo, IT, KI, MH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honour of Thomas Arthur Cope (1949-) English botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, slender, 50–75 cm long. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths 5–10 cm long, keeled, glabrous on surface. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades 10–22 cm long, 1–2 mm wide. Leaf-blade midrib conspicuous, keeled beneath. Leaf-blade margins scaberulous, tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2(–3), single or paired, unilateral, 5–10 cm long. Rhachis angular, 0.6–0.75 mm wide, glabrous on surface or puberulous on surface, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened, 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, laterally compressed, compressed strongly, 7.5–8 mm long, falling entire. Spikelet callus pubescent, base obtuse. Spikelet callus hairs 0.5–1 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or oblong, 5.5–5.75 mm long, 0.75 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged above. Lower glume primary vein ciliate. Lower glume surface asperulous, rough at apex, pubescent. Lower glume apex setaceously acuminate. Upper glume elliptic or oblong, 7–7.25 mm long, 1 length of spikelet, coriaceous, 1-keeled, winged on keel. Upper glume primary vein ciliate. Upper glume surface asperulous, rough at apex, pubescent. Upper glume margins ciliate. Upper glume apex setaceously acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3 mm long, hyaline, 1 -veined, with obscure midvein, without lateral veins, ciliate on margins, fringed above, acute. Fertile lemma oblong, 3.5–4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12–14 mm long overall, with twisted column. Column of lemma awn 3.5–4 mm long, glabrous. Palea lanceolate, 0.75 mm long, hyaline. Palea keels tuberculate (papillose above).

Flower and Fruit. Lodicules 2, cuneate, 0.25 mm long. Anthers 2, 1.25–2 mm long. Caryopsis with adherent pericarp, ellipsoid or oblong, 2.5–2.75 mm long, acute.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Kerala.

Dimeria deccanensis Bor. *Kew Bull.* 578 (1952).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ind. Or: Madaras State. Peliccode, S. Kanara, 11 Nov. 1917, 15340 *ex Madras Herb.* (HT: K).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Deccan region of India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–70 cm long. Culm-nodes bearded. Leaves mostly basal. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.5–0.9 mm long. Leaf-blades 3–6 cm long, 1.5–3 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scabrous, rough on both sides, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2(–3), paired, unilateral, 4–7 cm long. Rhachis flattened, 0.75 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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 strongly, 3.5 mm long, falling entire. Spikelet callus square, 0.5 mm long, bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 3.25 mm long, 0.9 length of spikelet, chartaceous, much thinner on margins, 1-keeled. Lower glume primary vein ciliate. Lower glume surface scabrous, rough above, pilose, hairy below. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline, ciliate on margins. Fertile lemma elliptic, 1.5–2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn 3 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala. Tamilnadu.

Dimeria dipteros Reeder. *Journ. Arn. Arb.* 29: 324 (1948).

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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *L.J. Brass 11738*, Dec 1938, Indonesia: New Guinea (GH; IT: US-1761787).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. dis, twice; pteron, wing. Both glumes prominently winged on the keel.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–80 cm long. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths keeled, pilose. Ligule a ciliate membrane, 0.6 mm long. Leaf-blades 5–12 cm long, 3–5 mm wide. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 5–8 cm long. Rhachis narrowly winged, flattened, 1 mm wide, ciliate on margins. Rhachis hairs 0.5–1 mm long. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5 mm long, 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 obovate, laterally compressed, compressed strongly, 4.5–5 mm long, falling entire. Spikelet callus pubescent.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 0.9 length of spikelet, coriaceous, 1-keeled, winged on keel, winged broadly, winged all along, 3 -veined. Lower glume surface pubescent. Lower glume margins ciliate. Lower glume apex acute. Upper glume elliptic, coriaceous, 1-keeled, winged on keel, winged all along, 3 -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 lanceolate, 2.5–3 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 3.5–4 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn 1.5–2 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia, Papuaia. New Guinea PNG. New Guinea.

Dimeria eradii N. Ravi. *Rheedeia*, 5(1): 39 (1995).

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, Kerala, Tenhipaam: Ravi 3641 (TBGT holo, KFRI, MH).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms slender, 20–40 cm long, 0.3 mm diam. Culm-internodes distally glabrous. Culm-nodes pubescent. Leaves mostly basal. Leaf-sheaths 3–7 cm long, keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–0.75 mm long. Leaf-blades 5–9 cm long, 2–4 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–3, single or paired or digitate, flexuous, unilateral, 5–10 cm long. Rhachis broadly winged, 0.6–1 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.3 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, compressed strongly, 3–4.5 mm long, falling entire. Spikelet callus square, 0.25 mm long, pubescent, base obtuse. Spikelet callus hairs 0.5–0.75 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged all along. Lower glume primary vein scaberulous, ciliate. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged above. Upper glume surface asperulous, pilose. Upper glume margins ciliate. Upper glume apex acuminate, awned, 1 -awned, awn 1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins, fringed above, acute. Fertile lemma oblanceolate, 2 mm long, without keel, 0–3 -veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6.5–7.5 mm long overall, with twisted column. Column of lemma awn 2.5 mm long. Palea 0.4 mm long.

Flower and Fruit. Lodicules 2, cuneate. Anthers 2, 1.5–1.75 mm long. Caryopsis with adherent pericarp, oblong, 1–1.25 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India. Kerala.

Dimeria falcata Hack. *DC. Monog. Phan.* 6: 85 (1889).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, S-L Chen et al, *Flora of China* 22 (Poaceae) (2006), T.Koyama, *Grasses of Japan and its neighboring regions* (1987).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China, Canton: Hance 1385.

Illustrations (Books): C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (670), C-C Hsu, *Taiwan Grasses* (1975) (641, Pl. 1461), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 862).

Derivation (Clifford & Bostock 2007): L. falx, sickle; -ata, possessing. Inflorescence branches curved.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms 40–50 cm long, 7–9 -noded. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths pubescent. Ligule a ciliolate membrane, 0.4–0.5 mm long. Leaf-blades 6–10 cm long, 2–3 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, arcuate, unilateral, 2–6 cm long. Rhachis narrowly winged, flattened, 0.6 mm wide, ciliate on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 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, laterally compressed, compressed strongly, 4 mm long, falling entire. Spikelet callus oblong, pubescent, base obtuse. Spikelet callus hairs 0.8–1 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, red, 1-keeled, 3 -veined. Lower glume primary vein ciliate. Lower glume margins eciliate or ciliolate. Lower glume apex acute. Upper glume lanceolate, coriaceous, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, 2–2.5 mm long, hyaline, ciliolate on margins, obtuse. Fertile lemma elliptic, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma margins eciliate or ciliolate. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 2 mm long.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. China, Eastern Asia. China Southeast. Taiwan. **Indian Subcontinent, Indo-China.** India. Myanmar, Thailand, Vietnam.

TDWG4. Fujian, Guangdong, Guangxi.

Dimeria fischeri Bor. *Kew Bull.* 564 (1952).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Mahendragiri: Fischer 133 (K holotype).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): in honor of Cecil Ernest Claude Fischer (1874–1950) Indian botanist born of European parents.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 5–10 cm long. Culm-nodes bearded. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 1–7 cm long, 1–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2–3 cm long. Rhachis narrowly winged, 0.75 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened, 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, laterally compressed, compressed strongly, 4 mm long, falling entire. Spikelet callus 0.5 mm long, bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 3.5 mm long, 1 length of spikelet, coriaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume elliptic, 3.5 mm long, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, hyaline, ciliolate on margins. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10 mm long overall, with twisted column. Column of lemma awn 3.5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.8 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. **Indian Subcontinent.** India.

TDWG4. Kerala. Tamilnadu.

Dimeria fuscescens Trin. *Mem. Acad. Petersb. Ser.* 6, 2: 335 (1833).

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 Nepal. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Nepal: Wallich 8841 (K iso).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143, Fig 4), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (pl.759 & pl.760).

Derivation (Clifford & Bostock 2007): L. fuscresco, become dark. Lemma brown.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial. Culms erect or geniculately ascending or decumbent, 30–60 cm long, without nodal roots or rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 4–15 cm long, 2–5 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes (2–)3(–4), digitate, sinuous, unilateral, 5–11 cm long. Rhachis angular, glabrous on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 4–5.5 mm long, falling entire. Spikelet callus pubescent, base truncate or obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3-veined. Lower glume primary vein smooth, ciliate. Lower glume apex acute. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along or near apex, 3-veined. Upper glume primary vein smooth, ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline, ciliate on margins. Fertile lemma elliptic, 3.5 mm long, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 6–11 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

N = 25 (1 ref TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, India, Nepal, Sri Lanka. Myanmar, Thailand.

Dimeria gracilis Nees ex Steud. *Syn. Pl. Gram.* 413 (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: Ceylon [and Madras State], *Ex Hrbo Lindley s.n.*.

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): L. slender. Culms or inflorescences slender.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 45–90 cm long. Ligule an eciliate membrane. Leaf-blades erect, 15–25 cm long, 2–3 mm wide, stiff. Leaf-blade surface pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 2–5, paired or digitate, straight, unilateral, 4–8 cm long. Rhachis subterete, glabrous on margins. Spikelet packing crowded, 0.5 their length apart, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, linear, terete, 1 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 4.5–5.5 mm long, falling entire. Spikelet callus pubescent, base truncate.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3-veined. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, wingless, 3-veined. Upper glume primary vein ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma elliptic, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 5–9 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. India, Sri Lanka.

TDWG4. Tamilnadu.

Dimeria guangxiensis S.L. Chen & G.Y. Sheng. *Bull. Bot. Res. North-East. Forest. Univ.*, 13(1): 77 (1993).

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: Guangxi: Huaiji Xian, grassy hillsides below 500 m, 12 Dec. 1933, H.D. Zeng 23171, *pro parte* (HT: JSBI).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 863).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Guangxi Province, China.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 35–40 cm long, 6–8 -noded. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 2–5 cm long, 1.5–3.5 mm wide. Leaf-blade surface pubescent, densely hairy, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, erect, unilateral, 2.5–3.5 cm long. 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, laterally compressed, compressed strongly, 3.5 mm long, falling entire. Spikelet callus pilose.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 1 length of spikelet, coriaceous, light brown, 1-keeled. Lower glume apex obtuse. Upper glume lanceolate, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate or obovate, 2 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 2.5 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, curved or geniculate, 8 mm long overall, without a column or with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.8 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

TDWG4. Guangxi.

Dimeria heterantha S.L. Chen & G.Y. Sheng. *Bull. Bot. Res. North-East. Forest. Univ.*, 13(1): 77 (1993).

Not on *GrassBase*.

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Anhui: Xiuning, 11 Oct. 1920, C. Courtoi 27148 *pro parte* (HT: JSBI).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *heteros*, different; *anthos*, flower. Spikelets paired and dissimilar.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 30–60 cm long, 6–8 -noded. Culm-nodes bearded. Ligule a ciliolate membrane, 0.5–0.7 mm long, erose, truncate. Leaf-blades 2–6 cm long, 1–2.5 mm wide. Leaf-blade surface glabrous. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 2–3.7 cm long. Rhachis angular, glabrous on surface, scaberulous on margins, glabrous on margins. 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 oblong, laterally compressed, compressed strongly, 3–3.5 mm long, falling entire. Spikelet callus pubescent, base truncate.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 0.95 length of spikelet, chartaceous, 1-keeled. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, chartaceous or coriaceous, with hyaline margins, without keels, wingless. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma elliptic, 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, 4.5 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.5–0.7 mm long. Caryopsis with adherent pericarp, oblong, 2.5 mm long.
Distribution (TDWG). Continent. Temperate Asia.
Country /Province /State. China. China Southeast.
TDWG4. Anhui.

Dimeria hohenackeri Hochst. ex Miq. *Verh. Nederl. Inst.* 3, 4: 35 (1851).

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>: *vide* TROPICOS and Kew Synonymy Database: India, *Hohenacker 231* (HT:K).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960).

Derivation (Clifford & Bostock 2007): in honor of Rudolf Friedrich Hohenacker (1798–1874) Swiss-born German botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms slender, 30–60 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades 3–6 cm long, 2–4 mm wide, flaccid. Leaf-blade surface smooth or scaberulous, rough on both sides, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous, tuberculate-ciliate. Leaf-blade apex acute or acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 3–4, digitate, unilateral, 4–12 cm long. Rhachis angular, scabrous on margins, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.2–0.9 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 linear, laterally compressed, compressed strongly, 4–5 mm long, falling entire. Spikelet callus 0.25 mm long, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 4–5 mm long, 1 length of spikelet, coriaceous, much thinner on margins, without keels. Lower glume surface scabrous, rough above. Lower glume apex acute. Upper glume oblong, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, wingless. Upper glume surface pubescent. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.8–3 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 3.5–4 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10 mm long overall, with twisted column. Column of lemma awn 4 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1.5–2.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala. Tamilnadu.

Dimeria idukkiensis N. Ravi & N. Anil Kumar. *Rheedea*, 2(2): 104 (1992).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from India. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: India, Kerala, Idukki Distr., Kuttikkanam: Kumar 3190 (MH holo, CAL, KFRI, SNCH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From the Idduki District, Kerala state, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms slender, 7–15 cm long. Culm-internodes smooth. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths 3–6.5 cm long, keeled. Ligule a ciliolate membrane, 1 mm long. Leaf-blades linear or lanceolate, 2–5 cm long, 3–5 mm wide. Leaf-blade surface pilose, hairy abaxially, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral. Rhachis broadly winged, 1 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5–0.75 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret

male or barren, the upper fertile. Spikelets elliptic or oblong, laterally compressed, compressed strongly, 4.5–5.5 mm long, falling entire. Spikelet callus pubescent, base obtuse. Spikelet callus hairs 0.75 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or elliptic, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged above. Lower glume primary vein ciliate. Lower glume surface asperulous. Lower glume margins eciliate or ciliolate. Lower glume apex acute. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged above. Upper glume primary vein ciliate. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 3–3.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12 mm long overall, with twisted column. Column of lemma awn 4–5 mm long. Palea absent or minute.

Flower and Fruit. Lodicules 2. Anthers 2, 1 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). **Continent.** Tropical Asia.

Country /Province /State. **Indian Subcontinent.** India.
Kerala.

Dimeria jainii P.V. Sreekumar, V.J. Nair & N.C. Nair. *Curr. Sci.*, 52(6): 259 (1983).

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, Kerala, Nanminda: Sreekumar 71814 (CAL holo, MH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Sudhanshu Kumar Jain (1926-) Indian botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 10–20 cm long. Culm-nodes glabrous. Leaf-sheaths 1–5 cm long, mostly shorter than adjacent culm internode, keeled, hirsute, with tubercle-based hairs. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 2–8 cm long, 2–3 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2–3, paired or digitate, unilateral, 2–4 cm long. Rhachis flattened, 0.5 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 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, laterally compressed, compressed strongly, 3–3.5 mm long, falling entire. Spikelet callus pubescent, base obtuse. Spikelet callus hairs 0.5–1 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, coriaceous, 1-keeled. Lower glume margins ciliate. Lower glume hairs 0.5–2 mm long. Lower glume apex acute. Upper glume ovate, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume margins ciliolate. Upper glume hairs 1–2 mm long. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5–2 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 1.75–2 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10–12 mm long overall, with twisted column. Column of lemma awn 1 mm long. Palea absent or minute.

Flower and Fruit. Lodicules 2, 0.4 mm long. Anthers 2, 0.5 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). **Continent.** Tropical Asia.

Country /Province /State. **Indian Subcontinent.** India.

TDWG4. Kerala.

Dimeria josephii Ravi & N.Mohanan. *Rheedea* 11(2): 90 (2001).

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, Kerala, Nenmara: Ravi 39542 (TBGT holo, CAL, CALI, K, MH).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms 15–30 cm long. Culm-nodes glabrous. Leaves mostly basal. Leaf-sheaths 4–8 cm long, keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.25 mm long, truncate or obtuse. Leaf-blades linear or lanceolate, 3–5 cm long, 2–4 mm wide. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 3–5 cm long. Rhachis narrowly winged, flattened, 1 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.25 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, laterally compressed, compressed strongly, 5–6 mm long, falling entire. Spikelet callus 0.5 mm long, pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume margins ciliate. Lower glume apex attenuate. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged above. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume hairs 1–2 mm long. Upper glume apex attenuate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 3–3.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 13–16 mm long overall, with twisted column. Column of lemma awn 4–6 mm long. Palea lanceolate, 0.75 mm long. Palea surface papillose.

Flower and Fruit. Lodicules 2, cuneate, 0.5 mm long, truncate. Anthers 2, 0.75–1 mm long. Caryopsis with adherent pericarp, oblong, 2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria kalavoorensis N. Ravi. *Blumea*, 41(1): 253 (1996).

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, Kerala, Kalavoor: Ravii 3654 (TBGT holo, IT, KI, MH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ensis*, denoting origin. From Kalavoor, Kerala State, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, culms solitary. Culms erect, slender, 20–45 cm long, without nodal roots or rooting from lower nodes. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths tight, 3–6 cm long, keeled, glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 2–5 cm long, 2 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade venation with 4 secondary veins. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 0.5–4 cm long. Rhachis narrowly winged, angular, 0.5–0.6 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened, 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, laterally compressed, compressed strongly, acuminate, 6–6.5 mm long, falling entire. Spikelet callus pubescent, base obtuse. Spikelet callus hairs 0.5–1 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 4.5–5 mm long, 0.75 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged above. Lower glume primary vein ciliate. Lower glume surface pubescent. Lower glume apex setaceously acuminate. Upper glume elliptic or oblong, 5–5.25 mm long, 1 length of spikelet, coriaceous, 1-keeled, winged on keel. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume margins ciliate. Upper glume apex setaceously acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5 mm long, hyaline, 1 -veined, with obscure midvein, without lateral veins, ciliate on margins, fringed above, acute. Fertile lemma oblong, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9.5–11.5 mm long overall, with twisted column. Column of lemma awn 3–3.5 mm long, glabrous. Palea elliptic, 0.75 mm long, hyaline. Palea keels tuberculate (papillose above).

Flower and Fruit. Lodicules 2, cuneate, 0.25 mm long. Anthers 2, 1–1.5 mm long. Caryopsis with adherent pericarp, ellipsoid or oblong, 1–1.5 mm long, acute.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria keenanii Bor. *Notes Roy. Bot. Gard. Edinb.* 28: 299 (1968).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Myanmar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Keenan, U. Tun Agun & R.H. Rule 1778*, Oct 1961, Burma: Tenasserim Division: Tavoy District: area within a radius of 12 miles from Paungdaw (c. 14:N, c. 98:30'E) (E; IT: K, MO).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Keenan who collected in Myanmar.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 20–40 cm long. Culm-nodes pubescent. Leaf-sheaths loose, pilose. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 4–9 cm long, 2–4 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 3–4 cm long. Rhachis flattened, ciliate on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, compressed strongly, 5.5 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 4.5 mm long, 0.8 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged all along, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume oblong, 5.5 mm long, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, with vestigial lower floret. Fertile lemma elliptic, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 9–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Myanmar.

Dimeria keralae N.C. Nair, P.V. Sreekumar & V.J. Nair. *J. Bombay Nat. Hist. Soc.*, 80(3): 626 (1984).

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, Kerala, Paramba: Sreekumar 71717 (CAL holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Kerala, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 10–30 cm long. Culm-internodes purple. Culm-nodes pubescent. Leaf-sheaths loose, 2–6 cm long, mostly shorter than adjacent culm internode, keeled, glabrous on surface. Ligule a ciliolate membrane. Leaf-blades linear or lanceolate, 2–5 cm long, 1–2 mm wide. Leaf-blade midrib conspicuous. Leaf-blade margins glabrous or tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, intertwined, unilateral, 2–5 cm long. Rhachis angular, 0.25 mm wide, glabrous on margins. Spikelet packing crowded. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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 oblanceolate, laterally compressed, compressed strongly, 4–5 mm long, falling entire. Spikelet callus oblong, 1–2 mm long, pilose, attached obliquely. Spikelet callus hairs yellow, 1–1.5 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 3.5–4 mm long, 0.8–0.9 length of spikelet, coriaceous, 1-keeled, winged on margins, winged near apex. Lower

glume apex emarginate. Upper glume lanceolate or oblong, 4–5 mm long, 1 length of spikelet, coriaceous, without keels, winged on margins, winged near apex. Upper glume surface hirsute, hairy at apex. Upper glume margins ciliolate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3–4 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins, fringed above. Fertile lemma oblong, 3–4 mm long, cartilaginous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, twisted together, 20–30 mm long overall, with twisted column. Column of lemma awn 10–15 mm long, glabrous. Palea 0.5–0.75 mm long, hyaline, 0 -veined. Palea surface pilose, hairy on margins.

Flower and Fruit. Lodicules 2, 0.5 mm long. Anthers 2, 1–1.5 mm long. Caryopsis with adherent pericarp, oblong, 2–2.5 mm long. Disseminule comprising a caryopsis and palea.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria kollimalayana M. Mohanan & A.V.N. Rao. *J. Bombay Nat. Hist. Soc.*, 80(3): 617 (1984).

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, Tamil Nadu, Kollimalai: Mohanan 56208 (CAL holo, MH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Kollimala, South India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms 10–20 cm long. Culm-nodes pubescent. Leaf-sheaths 1–5 cm long, keeled, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1 mm long. Leaf-blade base broadly rounded. Leaf-blades linear or lanceolate, 2–6 cm long, 3–4 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, with tubercle-based hairs.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, ascending, sinuous, unilateral, 2–3 cm long. Rhachis flattened, 0.75 mm wide, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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, laterally compressed, compressed strongly, 4–4.5 mm long, falling entire. Spikelet callus pubescent, base obtuse. Spikelet callus hairs 0.5–1 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, 1-keeled. Lower glume surface scabrous. Lower glume apex acuminate. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged near apex. Upper glume surface villous. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5–2 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 2.5–3 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn 3 mm long. Palea absent or minute.

Flower and Fruit. Lodicules 2. Anthers 2, 0.5–0.75 mm long. Caryopsis with adherent pericarp, oblong, 2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Tamilnadu.

Dimeria kurzii Hook. f. *Fl. Brit. Ind.* 7: 103 (1896).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*), N.L.Bor, Grasses of Burma, Ceylon, India and Pakistan (1960).

TYPE from Myanmar. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Burma, Irrawady & Sittang valley: Kurz 2741 (K holo).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);

Derivation (Clifford & Bostock 2007): in honor of Wilhelm Sulpiz Kurz (1834–1878) German botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms slender, 30–60 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5–1 mm long. Leaf-blades 4–8 cm long, 2–3.5 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scaberulous, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Peduncle widened at apex. Racemes 1, single, straight or arcuate, unilateral, 3.5–5.5 cm long. Rhachis ciliate on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 3–3.5 mm long, falling entire. Spikelet callus bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 2.5 mm long, 0.75–0.85 length of spikelet, coriaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume surface pubescent, hairy below. Lower glume apex acute, mucicous or mucronate. Upper glume elliptic, 3–3.5 mm long, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3-veined. Upper glume primary vein ciliate. Upper glume surface pilose, hairy on veins. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5 mm long, hyaline. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 12–18 mm long overall, with twisted column. Column of lemma awn 4 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.6 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China, Malesia. Assam. Cambodia, Laos, Myanmar, Thailand, Vietnam. Malaya.

Dimeria lawsonii (Hook.f.) C. E. C. Fischer. Gamble, *Fl. Madras*, 1713 (1934).

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. **Basionym or Replaced Name:** *Dimeria pusilla* var. *lawsonii* Hook. f., *Fl. Brit. India* 7:103 (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Wynaad: Lawson 22 (K holotype).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): in honor of Marmaduke Alexander Lawson (1840–1896) English botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms decumbent, slender, 10–25 cm long. Culm-nodes bearded. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 4–8 cm long, 2–3 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous. Leaf-blade margins cartilaginous, scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight or arcuate, unilateral, 3–3.5 cm long. Rhachis narrowly winged, 0.75 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened, 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, laterally compressed, compressed strongly, 5.5 mm long, falling entire. Spikelet callus base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma, recurved at apex. Lower glume oblong, 4.5 mm long, 0.75–0.8 length of spikelet, coriaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume apex acuminate. Upper glume elliptic, 5.5 mm long, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along or above. Upper glume primary vein ciliate. Upper glume apex acuminate, awned, 1-awned, awn 1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–3 mm long, hyaline. Fertile lemma oblong, 2.5–3 mm long, hyaline, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn 3.5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.8–0.9 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala. Tamilnadu.

Dimeria lehmannii (Steud.) Hack. *DC. Monog. Phan.* 6: 82 (1889).

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 *D. alata*).

TYPE from India. **Basionym or Replaced Name:** *Pterygostachyum lehmannii* Nees ex Steud., *Syn. Pl. Glumac.* 1: 413 (1854)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ind. or., *Nees mpt.* apparently polymorphic as described, see Bor. *Grass. Burm. etc.* p. 139 (1960).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143 & as *D. alata*).

Derivation (Clifford & Bostock 2007): in honor of Friedrich Karl Lehmann (1850–1903) who collected in South America.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculate ascending, 30–60 cm long. Ligule an eciliate membrane. Leaf-blades 6–15 cm long, 2–3 mm wide. Leaf-blade surface glabrous to pilose.

Inflorescence. Inflorescence composed of racemes. Racemes (1–)2–3, paired or digitate, straight or sinuous, unilateral, 4–9 cm long. Rhachis flattened or angular, glabrous on margins or ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 2.5–3.5 mm long, falling entire. Spikelet callus glabrous to pilose, base truncate.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged above, 3 -veined. Lower glume primary vein eciliate or ciliate. Lower glume apex acute. Upper glume oblong, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along, 3 -veined. Upper glume primary vein ciliate. Upper glume apex obtuse or acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.5 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 2.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, mucicous or mucronate, 1 -awned. Principal lemma awn from a sinus, straight, 0–3 mm long overall. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. India, Sri Lanka. Vietnam.

TDWG4. Tamilnadu, West Bengal.

Dimeria leptorhachis Hack. *DC. Monog. Phan.* 6: 87 (1889).

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)* (as *D. velutina*), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *D. velutina*).

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Dimeria velutina* (Hack.) Bor, *Kew Bull.* 1951, 458 (1952). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ceylon, *Thwaites* 24, 3261.

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143 as *D. velutina*).

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971); (as *D. velutina*).

Derivation (Clifford & Bostock 2007): Gk. leptos, narrow; rhachis, backbone; Inflorescence with a slender central axis.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–120 cm long. Ligule an eciliate membrane. Leaf-blades 15–25 cm long, 3–10 mm wide. Leaf-blade surface pubescent or pilose.

Inflorescence. Inflorescence composed of racemes. Racemes 3–10, digitate, straight, unilateral, 8–15 cm long. Rhachis subterete, glabrous on margins. Spikelet packing crowded, 0.6–0.8 their length apart, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 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, laterally compressed, compressed strongly, 5–8 mm long, falling entire. Spikelet callus pubescent, base truncate.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3 -veined. Lower glume primary vein eciliate or ciliate. Lower glume apex acute. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, wingless, 3 -veined. Upper glume primary vein eciliate or ciliate. Upper glume surface pilose. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma elliptic, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China, Malesia. Sri Lanka. Myanmar, Thailand. Malaya.

Dimeria madagascariensis A.Camus. *Bull. Soc. Bot. France* 71: 1061 (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 occident.: rochers granitiques et humides du mont Ambohibenga, *Perrier de la Bathie* (HT: P).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ense*, denoting origin. From Madagascar.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 35–45 cm long. Culm-nodes pubescent. Leaf-sheaths keeled, glabrous on surface. Ligule a ciliolate membrane, truncate. Leaf-blades 8–10 cm long, 3 mm wide. Leaf-blade venation indistinct, with 6 secondary veins. Leaf-blade surface hirsute. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, erect, unilateral, 3.5–4 cm long. Rhachis flattened, scaberulous on margins, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Rhachis internodes 1.2–2 mm long. Raceme-bases filiform, unequal (the longer measured), 3 mm long. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 4 mm long, falling entire. Spikelet callus 0.5 mm long, pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 4 mm long, 1 length of spikelet, chartaceous, red, 1-keeled. Lower glume primary vein scaberulous, ciliate. Lower glume surface pilose, hairy above. Lower glume apex attenuate. Upper glume elliptic, 3.5–3.7 mm long, 0.9 length of spikelet, chartaceous, red, without keels, wingless. Upper glume primary vein scaberulous, ciliate. Upper glume surface pilose, hairy above. Upper glume apex attenuate.

Florets. Basal sterile florets 1, with vestigial lower floret. Fertile lemma lanceolate, 2.5 mm long, hyaline, without keel. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Dimeria mahendragiriensis N. Ravi, H.O. Saxena & M. Brahmam. *Rheedea*, 5(2): 142 (1995).

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, Orissa, Mahendragiri: Saxena & Brahmam 3880 (TBGT iso).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial. Culms geniculately ascending, slender, rooting from lower nodes. Culm-nodes pubescent. Lateral branches sparse. Leaf-sheaths 3–6 cm long, longer than adjacent culm internode, keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1–1.5 mm long, truncate. Leaf-blades 5–10 cm long, 2–4 mm wide. Leaf-blade midrib keeled beneath. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 4–5 cm long. Rhachis narrowly winged, flattened, 0.75 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5 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, laterally compressed, compressed strongly, 4–5 mm long, falling entire. Spikelet callus square, 0.5 mm long, pubescent, base obtuse. Spikelet callus hairs 0.75 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 1 length of spikelet, coriaceous, pallid, 1-keeled, winged on keel, winged narrowly, winged above. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, pallid, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–2.5 mm long, hyaline, ciliate on margins, fringed above, acute. Fertile lemma elliptic, 2.5–3 mm long, without keel, 0–3 -veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn 3 mm long. Palea 0.75 mm long.

Flower and Fruit. Lodicules 2, cuneate. Anthers 2, 1.5 mm long. Caryopsis with adherent pericarp, oblong, 1.75–2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Orissa.

Dimeria manongarivensis A. Camus. *Bull. Soc. Bot. France*, 71: 1061 (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: Madagascar, Manongarivo: Perrier 11077.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 18–20 cm long. Culm-nodes bearded. Leaves without demarcation between sheath and blade. Leaf-sheaths keeled, hirsute. Ligule an eciliate membrane, lacerate, truncate. Leaf-blades linear or lanceolate, 2–4 cm long, 2–3 mm wide, flaccid. Leaf-blade venation indistinct, with 4 secondary veins. Leaf-blade surface hirsute. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 3–3.5 cm long. Rhachis flattened, 0.2–0.3 mm wide, scaberulous on margins, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Rhachis internodes 3 mm long. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 4 mm long, falling entire. Spikelet callus base obtuse.

Glumes. Glumes dissimilar, with lower narrower than upper, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 3.8–4 mm long, 0.9–1 length of spikelet, chartaceous, 1-keeled. Lower glume apex acuminate. Upper glume elliptic, 4 mm long, 1 length of spikelet, chartaceous or coriaceous, 1-keeled, winged on keel, 1 -veined. Upper glume lateral veins absent. Upper glume surface glabrous or puberulous. Upper glume margins ciliate. Upper glume apex acuminate, mucronate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma elliptic, 2.5 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, 8 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

TDWG4.

Dimeria monostachya Reeder. *Journ. Arn. Arb.* 29: 324 (1948).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, J.F.Veldkamp, Poaceae ms (*Flora Malesiana*).

TYPE from Papua New Guinea. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Papua New Guinea: Western Division: Lake Daviumbu, Middle Fly River, on wetter savannas, Sept. 1936, *Brass* 7806 (HT: A; IT: US (1723599)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. monos, one; stachys, ear of corn. The inflorescence is a single spike or raceme.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 25–45 cm long, 7-noded. Culm-nodes pubescent. Leaf-sheaths keeled, pilose. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades flat or conduplicate, 4–8 cm long, 2–3 mm wide. Leaf-blade surface pilose, hairy on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 5–7 cm long. Rhachis flattened, 0.8 mm wide, ciliate on margins. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.2 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 oblong, laterally compressed, compressed strongly, 3.5–4 mm long, falling entire.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 0.9 length of spikelet, coriaceous, 1-keeled, 3-veined. Lower glume primary vein ciliate. Lower glume surface pilose. Lower glume hairs white. Lower glume apex acute. Upper glume elliptic, coriaceous, 1-keeled, winged on keel, winged all along, 3-veined. Upper glume primary vein ciliate. Upper glume surface pilose. Upper glume hairs white. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–2.5 mm long, hyaline. Fertile lemma elliptic, 2.5–3 mm long, without keel, 1-veined, 0–3-veined, one-veined. Lemma apex dentate, 2-fid, awned, 1-awned. Principal lemma awn from a sinus, geniculate, 8 mm long overall, with twisted column. Column of lemma awn 1–1.5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.8 mm long.

Distribution (TDWG), Continent. Tropical Asia.

Country /Province /State. Malesia, Papuasia. New Guinea PNG. New Guinea.

Dimeria mooneyi Raiz. Mooney, *Suppl. Bot. Bihar & Orissa*, 263 (1950).

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: India, Orissa, Sonaabera: Mooney 3652 (K holo).

Illustrations (Books): N.L. Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143, Fig 4).

Derivation (Clifford & Bostock 2007): in honor of Herbert Francis Mooney (1897–1964) Irish-born Indian forester and plant collector.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 10–20 cm long, 3–6-noded. Culm-nodes bearded. Lateral branches lacking. Leaf-sheaths glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliate membrane, 0.5–0.9 mm long. Leaf-blades erect, linear or lanceolate, 2–6 cm long, 2–3 mm wide. Leaf-blade surface smooth or scabrous, rough on both sides, glabrous or pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins cartilaginous, scabrous, tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, erect or ascending, unilateral, 5.5 cm long. Rhachis narrowly winged, flattened, 1.5 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2-rowed. Spikelets ascending, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened, 0.5 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 oblong, laterally compressed, compressed strongly, 4.5–6.5 mm long, falling entire. Spikelet callus oblong, 0.5–1 mm long, bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 4.5–5 mm long, 0.9 length of spikelet, coriaceous, much thinner on margins, 1-keeled, winged on keel, winged below. Lower glume surface pilose. Lower glume apex acuminate. Upper glume elliptic, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along. 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 oblong, 3 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 2.5–3.5 mm long, hyaline, without keel, 1-veined,

0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 13–15 mm long overall, with twisted column. Column of lemma awn 5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1.75 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Orissa, Tamilnadu.

Dimeria namboodiriana N. Ravi & N. Mohanan. *Rheedea*, 7(1): 1 (1997).

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, Kerala, Ponnambalamedu: Ravi 24050 (TGBT holo, K, KFRI, L, MH).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, culms solitary or caespitose. Stolons present. Culms 25–50 cm long, rooting from lower nodes. Culm-internodes smooth. Lateral branches lacking or sparse. Leaf-sheaths 5–10 cm long, keeled, striately veined, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long, truncate. Leaf-blades erect, 20 cm long, 7 mm wide, stiff. Leaf-blade surface pilose, densely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, straight, unilateral, 8 cm long. Rhachis broadly winged, 1.5 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.25–0.5 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 or oblong, laterally compressed, compressed strongly, 4.5–5.75 mm long, falling entire. Spikelet callus square, 0.5 mm long, pubescent, base obtuse. Spikelet callus hairs 0.75 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 1 length of spikelet, coriaceous, light brown, 1-keeled, winged on keel, winged broadly, winged all along. Lower glume primary vein ciliolate. Lower glume surface asperulous. Lower glume margins eciliate or ciliolate. Upper glume elliptic or oblong, 1 length of spikelet, coriaceous, light brown, 1-keeled, winged on keel, winged all along. Upper glume surface asperulous. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.25–3.25 mm long, hyaline, 2 -veined, ciliolate on margins, fringed above, acute. Fertile lemma oblanceolate, 3.4–4 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Column of lemma awn 2–3.5 mm long. Palea 0.5 mm long.

Flower and Fruit. Lodicules 2, cuneate, 0.3 mm long. Anthers 2, 2–2.5 mm long. Caryopsis with adherent pericarp, oblong, 2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria neglecta Tzvelev. *Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS*, 18: 31 (1957).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.Tsvelev, *Grasses of the Soviet Union* (1983).

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *N.A.Desulavi 53*, 27 Aug 1922, Primorsky Territory: isl. Russkiy: margins of boggy meadows (LE). Original label: "Russkiy ostrov. Po okrainam bolotistykh lugov".

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. negligo*, disregard. Often a segregate from another species with which confusion is likely.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose, clumped loosely. Culms erect or geniculately ascending, 10–30 cm long. Leaf-sheaths loose, keeled, glabrous on surface or pilose. Ligule a ciliolate membrane, 1.2 mm long. Leaf-blades 8–10 cm long, 1.5–3 mm wide. Leaf-blade surface glabrous or pilose, sparsely hairy, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 1.5–7 cm long. Rhachis angular, 0.3–0.5 mm wide, glabrous on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, flattened, 0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, compressed strongly, 3.5–4 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 1 length of spikelet, coriaceous, 1-keeled. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged above. Upper glume surface asperulous. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5–2 mm long, hyaline, 0 -veined, without midvein, without lateral veins, ciliate on margins, fringed above. Fertile lemma elliptic, 3–3.5 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.5–0.7 mm long. Caryopsis linear, laterally compressed, 2 mm long. Embryo 0.5 length of caryopsis.

$2n = 14$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. Russian far east. Primorye.

TDWG4.

Dimeria orissae Bor. *Kew Bull.* 579 (1952).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Orissa, Pipokhuri: Mooney 2758 (K holotype).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3), K.M.Matthew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (pl.761).

Derivation (Clifford & Bostock 2007): from Orissa, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms slender, 10–22 cm long. Culm-nodes glabrous. Leaf-sheaths glabrous on surface. Ligule a ciliate membrane, 0.5 mm long. Leaf-blades erect, 3–7 cm long, 2–3 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scaberulous, rough on both sides, glabrous, hairless throughout or except near base. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, erect, straight or sinuous, unilateral, 3–5.5 cm long. Rhachis broadly winged, 1.25 mm wide, scabrous on margins, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 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, laterally compressed, compressed strongly, 4–4.25 mm long, falling entire. Spikelet callus 0.25 mm long, bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 3 mm long, 0.75 length of spikelet, coriaceous, much thinner on margins, 1-keeled. Lower glume primary vein scabrous. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged near apex. Upper glume primary vein scabrous. Upper glume surface scabrous, pilose, hairy at apex. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 10 mm long overall, with twisted column. Column of lemma awn 4 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Orissa.

Dimeria ornithopoda Trin. *Fund. Agrost.* 167 (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).

TYPE from India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Coll? (LE holo).

Recent Synonyms: *Dimeria glabriuscula* F.M.Bailey, *Syn. Queensl. Fl. Suppl.* 3: 83 (1890).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (392, Fig 153), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (672), C-C Hsu, *Taiwan Grasses* (1975), N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3), K.M.Matthew, Illustrations on the *Flora of Tamilnadu Carnatic* (1982) (Pl. 848 as var. *ornithopoda*), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (Pl. 762 as var. *khasiana*), H.B.Gilliland, *Grasses of Malaya* (1971) (215, Fig. 46 as var. *ornithopoda*), H.B.Gilliland, *Grasses of Malaya* (1971), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (59, Fig. 52), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (299, Pl. 87), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1146, Fig. 329), 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. 862 as *D. ornithopoda* ssp. *ornithopoda* & *D. ornithopoda* ssp. *subrobusta*).

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971); (as var. *ornithopoda* & var. *glabra*).

Derivation (Clifford & Bostock 2007): Gk. ornithos, bird; pous, foot. Racemes sometimes in threes and held erect resembling a bird's foot.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 20–50 cm long. Culm-nodes bearded. Leaf-sheaths keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades 2–4 cm long, 1–2 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface scaberulous, rough on both sides, hirsute, hairy on both sides, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, subtended by an inflated leaf-sheath. Racemes 2(–3), paired, erect or ascending, unilateral, 3–6 cm long. Rhachis flattened, 0.25–0.3 mm wide, scaberulous on margins, glabrous on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, (1–)2–3(–4.5) mm long, falling entire. Spikelet callus base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 0.8–3 mm long, 0.7–0.8 length of spikelet, chartaceous, much thinner on margins, 1-keeled. Lower glume surface scabrous. Lower glume margins ciliate. Lower glume apex acute. Upper glume elliptic, 1 length of spikelet, chartaceous or coriaceous, with hyaline margins, without keels, wingless. Upper glume surface scabrous. Upper glume margins ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 0.5–1.5 mm long, hyaline. Fertile lemma elliptic, 0.8–1.8 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, 4–5 mm long overall, with twisted column. Column of lemma awn 1.5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.25–0.5 mm long.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia, Australasia, Pacific.

Country /Province /State. **Western Asia, Arabian Peninsula, China, Eastern Asia.** Oman. China South Central, China Southeast. Japan, Korea, Nansei-Shoto, Taiwan. Japan Hokkaido, or Honshu, or Shikoku, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Assam, Bangladesh, India, Nepal. Andaman Is, Cambodia, Laos, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Singapore, Philippines, Sulawesi, Sumatra. New Guinea PNG. New Guinea. **Australia.** Western Australia, Northern Territory, Queensland. **Northwestern Pacific.** Caroline Is, Marianas.

TDWG4. Anhui, Fujian, Guangdong, Guangxi, Henan, Jiangsu, Jiangxi, Zhejiang. Guizhou, Sichuan, Yunnan. Kimberley. Darwin & Gulf. North, Central.

Dimeria paniculata Masamune. *Trans. Nat. Hist. Soc. Formosa*, 28: 149 (1938).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Caroline Island. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Caroline Is., Palau, Aimion: Hosokawa 9132.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 24 cm long. Leaf-sheaths 1.5–4.5 cm long, as wide as blade at the collar, glabrous on surface. Leaf-sheath oral hairs scanty or ciliate. Ligule a ciliate membrane, 0.5 mm long, truncate. Leaf-blades 4–5 cm long, 2.5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes (3–)4, digitate, unilateral, 5–7 cm long. Rhachis flattened, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Rhachis internodes 0.5–1.5 mm long. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, reduced to a stump, flattened, 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, laterally compressed, compressed strongly, 2 mm long, falling entire. Spikelet callus base obtuse.

Glumes. Glumes dissimilar, with lower narrower than upper, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 2 mm long, 1 length of spikelet, chartaceous, 1-keeled. Lower glume apex acute. Upper glume lanceolate, 1 length of spikelet, chartaceous or coriaceous, 1-keeled, wingless. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.5 mm long, hyaline. Fertile lemma lanceolate, 1.8 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, 5.5 mm long overall, with twisted column. Palea absent or minute.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. Northwestern Pacific. Caroline Is.

TDWG4.

Dimeria parva (Keng & Y.L. Yang) S.L. Chen & G.Y. Sheng. *Fl. Reipubl. Popul. Sin.*, 10(2): 175 (1997).

Regarded by K as a synonym (*D. ornithopoda*).

Accepted by: S-L Chen et al, *Flora of China* 22 (Poaceae) (2006).

TYPE from China. **Basionym or Replaced Name:** *Dimeria ornithopoda* var. *parva* Keng & Y.L. Yang, *J. Nanjing Univ., Nat. Sci. Ed.* 1980(4): 108 (1980)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Taiwan: 1980, (HT: JSBI).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 861).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China, Eastern Asia. Taiwan.

Dimeria perrieri A. Camus. *Bull. Soc. Bot. France*, 71: 1060 (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: ST: *Perrier de la Bathie 11109*, Jul 1898, Madagascar occident: chutes de l'Ikopa entre Medelanana et Andriba (P).

ST: *Perrier de la Bathie 11111*, Apr 1904, Madagascar: rocailles granitiques du Mont Ambohibenga (P).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969).

Derivation (Clifford & Bostock 2007): in honor of Joseph Marie Henri Alfred Perrier de la Bbthie (1872–1958) French botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 15–30 cm long. Culm-nodes bearded. Lateral branches ample. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane. Leaf-blades 5–6 cm long, 2 mm wide. Leaf-blade surface glabrous or pilose, with tubercle-based hairs. Leaf-blade margins ciliate. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 4–5 cm long. Rhachis angular, 0.5–0.6 mm wide, scaberulous on margins, glabrous on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels absent.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 5 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear, 1 length of spikelet, coriaceous, 1-keeled. Lower glume primary vein scaberulous. Lower glume apex acuminate, mucronate. Upper glume oblong, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate, mucronate.

Florets. Basal sterile florets 1, with vestigial lower floret, barren, without significant palea. Fertile lemma elliptic, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 7–8 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 1 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Dimeria pubescens Hack. DC. *Monog. Phan.* 6: 83 (1889).

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 *D.ceylanica*, *D. trimenii*).

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Dimeria ceylanica* Bor, *Kew Bull.* 562 (1952). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: In insula Ceylon, C.P. Thwaites 956 ex p..

Recent Synonyms: *Dimeria kurumthotticalana* Jacob, *Journ. Bombay Nat. Hist. Soc.* 47: 49 (1947).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143 & as *D. trimenii* & *D. ceylanica*).

Derivation (Clifford & Bostock 2007): L. pubesco, become hairy. Plant whole or in part hairy.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Perennial, short-lived, mat forming or caespitose. Culms erect or decumbent, 15–60 cm long. Culm-nodes bearded. Ligule an eciliate membrane. Leaf-blades 3–20 cm long, 2–4 mm wide. Leaf-blade surface pilose or hirsute, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, straight, unilateral, 2.5–9 cm long. Rhachis flattened, 1.2–2.5 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.2–0.5 mm long.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets elliptic, laterally compressed, compressed strongly, 3.5–6 mm long, falling entire. Spikelet callus pilose, base truncate or obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless or winged on keel, winged narrowly, winged near apex, 3 -veined. Lower glume primary vein ciliate. Lower glume apex acute. Upper glume lanceolate, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged all along or near apex, 3 -veined. Upper glume primary vein ciliate. Upper glume apex acute or acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3.5 mm long, hyaline. Fertile lemma elliptic, 3 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. India, Sri Lanka. Thailand.

TDWG4. Karnataka. Madhya Pradesh, Orissa, Tamilnadu.

Dimeria raizadae V.J. Nair, P.V. Sreekumar & N.C. Nair. *Indian J. Forest.*, 6(2): 163 (1983).

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, Kerala, Nanminda: Sreekumar 71812 (CAL holo, MH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Mukat Behari Raizada (1907-) Indian botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 30–60 cm long. Culm-nodes glabrous. Leaf-sheaths 3–10 cm long, mostly shorter than adjacent culm internode, keeled, glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades linear or lanceolate, 4–10 cm long, 2–4 mm wide. Leaf-blade midrib prominent beneath. Leaf-blade surface pilose, hairy on both sides, with simple hairs or tubercle-based hairs. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 2, paired, unilateral, 6–10 cm long. Rhachis flattened, 0.75–1 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or ovate, laterally compressed, compressed strongly, 3–3.5 mm long, falling entire. Spikelet callus bearded, base obtuse. Spikelet callus hairs 1–1.5 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume linear or lanceolate, 1 length of spikelet, coriaceous, 1-keeled. Lower glume primary vein ciliate. Lower glume margins ciliate. Lower glume apex acuminate. Upper glume lanceolate or ovate, 1 length of spikelet, coriaceous, 1-keeled. Upper glume primary vein ciliate. Upper glume margins ciliate. Upper glume apex acuminate, awned, 1 -awned, awn 0.5–0.75 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 1.75–2 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 2–2.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–10 mm long overall, with twisted column. Column of lemma awn 3 mm long. Palea absent or minute.

Flower and Fruit. Lodicules 2. Anthers 2, 1–2 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG), Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria santapau Almeida. *Journ. Bombay Nat. Hist. Soc.* 66: 510 (1970).

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: lecta ad Mitjan in Kanara septentrionali mense octobri anni 1919, *Sedgwick & Bell 6875* (HT: BLAT; IT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Hermenegild Santapau (1903–1970) Spanish-born Indian cleric and botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 5–15 cm long. Culm-nodes bearded. Leaf-sheaths without keel. Ligule an eciliate membrane. Leaf-blades 2–5 cm long, 1–2 mm wide. Leaf-blade surface glabrous. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2 cm long, bearing few fertile spikelets, bearing 2–7 fertile spikelets on each. Rhachis flattened, glabrous on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets 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 strongly, 7 mm long, falling entire. Spikelet callus cuneate, 1.2–1.5 mm long, pubescent, base pungent.

Glumes. Glumes dissimilar, shorter than spikelet, firmer than fertile lemma. Lower glume elliptic, 3.5–4 mm long, 0.5 length of spikelet, coriaceous, 1-keeled. Lower glume apex acute. Upper glume lanceolate, 5 mm long, 0.7 length of spikelet, coriaceous, with hyaline margins, 1-keeled. Upper glume surface hispid, hairy at apex. Upper glume hairs 1–1.5 mm long. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret linear, 3 mm long, hyaline. Fertile lemma elliptic, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 26–37 mm long overall, with twisted column. Column of lemma awn 2–8 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Indian Subcontinent. India.
TDWG4. Maharashtra.

Dimeria sinensis Rendle. *Journ. Linn. Soc.* 6: 359 (1904).

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>: *fide* TROPICOS and Kew Synonymy Database: China: Guangdong: Guangzhou, *Hance 1385 in part* (T: BM).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 864).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Sina, now China.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 10–50 cm long. Culm-nodes pubescent. Lateral branches lacking. Leaf-sheaths hirsute, outer margin hairy. Ligule a ciliolate membrane. Leaf-blades 3–5 cm long, 1–2 mm wide. Leaf-blade surface hirsute, hairy adaxially. Leaf-blade margins ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 2–6 cm long. Rhachis flattened, 2 mm wide, ciliate on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, flattened, 0.5 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, laterally compressed, compressed strongly, 2–3 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume linear, 1 length of spikelet, coriaceous, 1-keeled. Lower glume margins ciliate. Lower glume apex obtuse. Upper glume lanceolate, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled. 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 oblong, hyaline, ciliolate on margins. Fertile lemma elliptic, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. China. China Southeast. **Indo-China.** Thailand.

TDWG4. Anhui, Fujian, Guangdong, Guangxi, Hong Kong, Jiangsu, Jiangxi, Zhejiang.

Dimeria sivarajanii N. Mohanan & N. Ravi. *Rheedea*, 6(2): 47 (1996).

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, Kerala, Kochu Pampa hills: Ravi 24041 (TBGT holo, KFRI, MH).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 20–40 cm long. Culm-nodes bearded. Lateral branches sparse. Leaf-sheaths 4–8 cm long, keeled, pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades linear or lanceolate, 15 cm long, 5 mm wide. Leaf-blade surface pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1–2, single or paired, unilateral, 4–7 cm long. Rhachis narrowly winged, flattened, 1–1.5 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5–0.75 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 or oblong, laterally compressed, compressed strongly, 5.5–7.5 mm long, falling entire. Spikelet callus 0.5–1 mm long, bearded, base obtuse. Spikelet callus hairs 1–1.5 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged all along. Lower glume surface asperulous. Lower glume margins ciliate. Lower glume apex acuminate, mucronate. Upper glume elliptic or

oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged all along. Upper glume apex acuminate, awned, 1 -awned, awn 0.5 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2.75 mm long, hyaline, 2 -veined, obscurely veined, ciliolate on margins. Fertile lemma elliptic, 3–4 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma surface papillose. Lemma margins ciliate. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 14 mm long overall, with twisted column. Column of lemma awn 3–5 mm long. Palea absent or minute.

Flower and Fruit. Lodicules 2. Anthers 2, 1.25–2 mm long. Caryopsis with adherent pericarp, oblong, 2–2.5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria solitaria Keng & Y.L. Yang. *J. Nanjing Univ., Nat. Sci. Ed.* 1980(4): 106 (1980).

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>: *fide* TROPICOS and Kew Synonymy Database: China: Guangdong: Luofu Shan, damp waste ground, 26 Oct. 1921, A.S. Hitchcock 19007 (HT: NJU).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 864).

Derivation (Clifford & Bostock 2007): *L. solitaria*. Inflorescence unbranched.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 9–19 cm long, 3–6 -noded. Lateral branches lacking. Leaf-sheaths puberulous, with tubercle-based hairs. Ligule an eciliate membrane, 0.4 mm long. Leaf-blades 1–3 cm long, 1–2.5 mm wide. Leaf-blade surface glabrous or pilose, hairy adaxially, with tubercle-based hairs. Leaf-blade margins tuberculate-ciliate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, unilateral, 1.5–2.5 cm long. Rhachis flattened, 1 mm wide, ciliate on margins. Spikelet packing regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, oblong, flattened, 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, laterally compressed, compressed strongly, 3 mm long, falling entire. Spikelet callus base obtuse.

Glumes. Glumes dissimilar, reaching apex of florets, firmer than fertile lemma. Lower glume linear, 1 length of spikelet, chartaceous, red, 1-keeled. Lower glume primary vein ciliate. Lower glume margins ciliolate. Lower glume apex obtuse. Upper glume lanceolate, 1 length of spikelet, chartaceous, 1-keeled, winged on keel, winged above. Upper glume primary vein ciliate. Upper glume apex acute.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret oblong, hyaline. Fertile lemma elliptic, 2 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 8–12 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 0.8 mm long.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

TDWG4. Guangdong.

Dimeria sreenarayanae N. Ravi & N. Anil Kumar. *Rheedea* 2(2): 101 (1992).

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, Kerala, Kuttikkanam: Kumar 3297 (MH holo, CAL, KFRI, SNCH).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honour of Sree Narayana Guru, Indian Saint and Social Reformer who founded a number of educational establishments in Kerala, India.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms 10–20 cm long. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Leaf-sheaths 3–7 cm long, keeled, glabrous on surface. Ligule a ciliolate membrane, 1 mm long, obtuse. Leaf-blade base cuneate. Leaf-blades linear or lanceolate, 3–7 cm long, 2–4 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy adaxially. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, flexuous, unilateral, 3–5 cm long. Rhachis broadly winged, 1–1.25 mm wide, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.75 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, laterally compressed, compressed strongly, 7 mm long, falling entire. Spikelet callus 0.5 mm long, bearded, base obtuse. Spikelet callus hairs 1.25 mm long.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic or oblong, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged narrowly, winged above. Lower glume primary vein ciliate. Lower glume apex setaceously acuminate. Upper glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, winged on keel, winged all along. Upper glume primary vein ciliate. Upper glume margins ciliate. Upper glume apex acuminate.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 3 mm long, hyaline, 1 -veined, without lateral veins, ciliolate on margins. Fertile lemma elliptic, 3.5 mm long, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 16 mm long overall, with twisted column. Column of lemma awn 6 mm long. Palea 1 mm long. Palea surface pilose, hairy on margins.

Flower and Fruit. Lodicules 2. Anthers 2, 1.5 mm long. Caryopsis with adherent pericarp, ellipsoid, 2 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Kerala.

Dimeria stapfiana C. E. Hubbard ex Pilger. *Engl. & Prantl, Nat. Pflanzenfam., Aufl. 2*, 14 e. 109 (1940).

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. **Basionym or Replaced Name:** *Woodrowia diandra* Stapf, *Hook. Ic. Pl.* t. 2447 (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India, Mawal: Woodrow (K holo).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143, Fig 4).

Derivation (Clifford & Bostock 2007): L. -ana, indicating connection. In honor of Otto Stapf (1857–1933) Austrian-born English botanist.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, slender, 20–45 cm long. Culm-nodes bearded. Lateral branches sparse. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 1 mm long. Leaf-blades 3–7 cm long, 2–5 mm wide. Leaf-blade surface scabrous, rough on both sides, pilose, hairy on both sides, with tubercle-based hairs. Leaf-blade margins scabrous, tuberculate-ciliate. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 4–7, digitate, unilateral, 5–10 cm long. Rhachis subterete, glabrous on margins. Spikelet packing lax, regular, 2 -rowed. Spikelets spreading, solitary. Fertile spikelets pedicelled. Pedicels present, clavate, flattened, 0.5–2 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, laterally compressed, compressed strongly, 4–7 mm long, falling entire. Spikelet callus oblong, 0.5 mm long, bearded, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 4–6 mm long, 0.8 length of spikelet, coriaceous, much thinner on margins, 1-keeled. Lower glume surface pubescent. Lower glume apex obtuse. Upper glume elliptic, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged above. 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 lanceolate, 2 mm long, hyaline, ciliate on margins. Fertile lemma elliptic, 3 mm long, hyaline, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 14 mm long overall, with twisted column. Column of lemma awn 5 mm long, glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2, 2.5–3 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Maharashtra.

Dimeria thwaitesii Hack. *DC. Monog. Phan.* 6: 78 (1889).

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: Sri Lanka, Damboul: Thwaites 3965.

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (141, Fig 3).

Derivation (Clifford & Bostock 2007): in honor of George Henry Kendrick Thwaites (1812–1882) English-born botanist, sometime Superintendent Botanic Gardens, Paradeniya, Sri Lanka.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect, 10–30 cm long. Ligule an eciliate membrane. Leaf-blades 1–10 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, straight, unilateral, 2–6 cm long. Rhachis flattened, ciliate on margins. Spikelet packing crowded, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets oblong, laterally compressed, compressed strongly, 3.5–5 mm long, falling entire. Spikelet callus pubescent, base obtuse.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume elliptic, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3 -veined. Lower glume primary vein ciliate. Lower glume apex acute or acuminate. Upper glume elliptic, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged near apex, 3 -veined. Upper glume primary vein ciliate. Upper glume apex acuminate, awned, 1 -awned, awn 0.5–1 mm long.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, hyaline. Fertile lemma elliptic, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 6–10 mm long overall, with twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Anthers 2.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. **Indian Subcontinent, Indo-China.** India, Sri Lanka. Cambodia, Laos, Thailand, Vietnam.

TDWG4. Kerala.

Dimeria veldkampii Kiran Raj & Sivadasan. *Novon* 18: 183 (2008).

TYPE from India. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Goa: North Goa Distr., Taleigao, 50 m, 27 Oct 2002, *M.S.Kiran Raj 81073* (holo CALI; iso MH, MO).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 10–18 cm long. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous or pubescent. Lateral branches lacking. Leaves cauline. Leaf-sheaths loose, smooth, glabrous on surface. Ligule a ciliolate membrane, 1–1.5 mm long. Leaf-blades 3–6 cm long, 1–2.5 mm wide. Leaf-blade midrib evident. Leaf-blade surface scaberulous, rough adaxially, glabrous, hairless throughout or except near base. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes, not deciduous as a whole, subtended by an inflated leaf-sheath, embraced at base by subtending leaf. Peduncle straight. Racemes 2, paired, watch-spring spiralled, unilateral, 2 cm long. Rhachis deciduous from axis (after spikelets fall), flattened, glabrous on surface, smooth on margins, glabrous on margins. Spikelet packing lax, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 0.5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1 basal sterile florets, 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets two-flowered - the lower floret male or barren, the upper fertile. Spikelets lanceolate or oblong, laterally compressed, compressed strongly, 4.5–5 mm long, falling entire. Spikelet callus square, 0.3 mm long, pilose.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 4 mm long, 0.9 length of spikelet, coriaceous, without keels, wingless. Lower glume surface glabrous. Lower glume margins eciliate or ciliolate. Lower glume apex obtuse. Upper glume oblong, 4.5–5 mm long, 1 length of spikelet, coriaceous, with hyaline margins, 1-keeled, wingless. Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–2.5 mm long, hyaline. Fertile lemma oblong, 2–2.5 mm long, membranous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus,

geniculate, 8–12 mm long overall, without a column or with a straight or slightly twisted column. Column of lemma awn 3–4.5 mm long. Palea absent or minute.

Flower and Fruit. Lodicules 2, 0.3 mm long. Anthers 2, 1 mm long. Caryopsis with adherent pericarp, oblong, laterally compressed, 1.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

Goa.

Dimeria woodrowii Stapf. *Hook. Icon. pl.* 24 t. 2312. (1894).

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 India. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Bombay, W.A. Talbot 2557 (HT:K).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (143, Fig 4).

Derivation (Clifford & Bostock 2007): in honor of George Marshall Woodrow (1846–1911) Scots-born Indian teacher and plant collector.

Classification. Subfamily Panicoideae. Tribe: Andropogoneae. Subtribe ISCHAEMINAE.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 5–15 cm long. Culm-nodes pubescent. Leaf-sheaths longer than adjacent culm internode. Ligule a ciliolate membrane, 1–1.5 mm long. Leaf-blades 3–7 cm long, 1–3 mm wide.

Inflorescence. Inflorescence composed of racemes, deciduous as a whole, subtended by an inflated leaf-sheath. Racemes 2, paired, incurved or watch-spring spiralled, unilateral, 0.7–2 cm long. Rhachis flattened, glabrous on margins. Spikelet packing lax, regular, 2 -rowed. Spikelets appressed, solitary. Fertile spikelets pedicelled. Pedicels present, cuneate, flattened, 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, laterally compressed, compressed strongly, 3–4 mm long, persistent on plant. Spikelet callus square, 0.5 mm long, pilose.

Glumes. Glumes dissimilar, exceeding apex of florets, firmer than fertile lemma. Lower glume oblong, 1 length of spikelet, coriaceous, 1-keeled, wingless, 3 -veined. Lower glume primary vein eciliate. Lower glume surface glabrous or pubescent (sparsely). Lower glume apex obtuse. Upper glume oblong, coriaceous, with hyaline margins, 1-keeled, winged on keel, winged near apex, 3 -veined. Upper glume primary vein scabrous, eciliate. Upper glume surface glabrous or pubescent (sparsely). Upper glume apex obtuse.

Florets. Basal sterile florets 1, barren, without significant palea. Lemma of lower sterile floret lanceolate, 2–2.5 mm long, hyaline. Fertile lemma ovate, 1.5 mm long, membranous, without keel, 1 -veined, 0–3 -veined, one-veined. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, straight or geniculate, 2–3 mm long overall, without a column or with a straight or slightly twisted column. Column of lemma awn glabrous. Palea absent or minute.

Flower and Fruit. Lodicules 2, cuneate, fleshy, truncate. Anthers 2, 1 mm long. Caryopsis with adherent pericarp, lanceolate, 2.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. India.

TDWG4. Maharashtra.

Dimorphochloa rigida S.T. Blake. *Pap. Dept. Bot. Univ. Queensland* 1(19): 2 (1941).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Cleistochloa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Cleistochloa*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Cleistochloa*).

TYPE from Australia, Queensland. **Basionym or Replaced Name:** *Dimorphochloa rigida* S.T. Blake, *Pap. Dept. Bot. Univ. Queensland* 1(19): 2 (1941). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *S.T. Blake 7711*, 19 Feb 1935, Australia: Queensland: Darling Downs Dist., 335 m (K, L, US-2962846, US-1819218).

Cleistochloa rigida (S.T. Blake) W.D. Clayton, *Kew Bull.*, 42(2): 401 [June] (1987).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (187), J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983) (198 as *Dimorphochloa*), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Illustrations (Journals): *Univ. Queensland Dept. Biol. Pap.* (1(19); 12, Pl.1 (1941)).

Derivation (Clifford & Bostock 2007): L. stiff. Culms, spikelets or inflorescence branches held stiffly erect.

Number of species: 1.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe NEURACHNINAE.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms erect, 30–80 cm long, wiry, 8–20 -noded. Culm-nodes pubescent. Lateral branches ample. Leaves cauline. Leaf-sheaths smooth, pilose, outer margin glabrous or hairy. Ligule a fringe of hairs, 0.4–0.8 mm long. Leaf-blades flat or involute, 2–10 cm long, 1.5–5 mm wide, stiff. Leaf-blade surface ribbed, smooth, pilose. Leaf-blade margins scabrous.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 4–9 cm long. Primary panicle branches appressed, 0.4–1.2 cm long, bearing 2–6 fertile spikelets on each lower branch, bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–2 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, subacute, 4.3–5.6 mm long, falling entire. Spikelet callus glabrous, base truncate.

Glumes. Glumes one the lower absent or obscure, shorter than spikelet, thinner than fertile lemma. Upper glume elliptic, 3.3–4.9 mm long, 0.8–0.9 length of spikelet, scarious, without keels, 5 -veined. Upper glume surface villous. Upper glume margins eciliate. 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 fertile lemma, membranous, 5–7 -veined, villous, ciliate on margins, acute. Fertile lemma lanceolate or elliptic, dorsally compressed, 4.3–5.6 mm long, coriaceous, without keel. Lemma lateral veins obscure. Lemma surface granulose, with distinct germination flap. Lemma margins flat, exposing palea. Lemma apex acute. Palea coriaceous, without keels.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp. Disseminule comprising a spikelet.

Cleistogenes present, in upper sheaths.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

TDWG4. Central, South East, Inland. Coast, Tablelands, Western Slopes.

Dimorphochloa Genus S.T. Blake. *Pap. Dept. Bot. Univ. Queensland* 1(19): 2 (1941).

Classification. Tribe: Paniceae. Subtribe NEURACHNINAE.

Dinebra aquatica (Scribn. & Merrill) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Leptochloa*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Leptochloa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Leptochloa*).

TYPE from Mexico. **Basionym or Replaced Name:** *Leptochloa aquatica* Scribn. & Merrill, *U.S. Dept. Agric. Bull. Agrost.* 24: 26 (1901). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Mexico, Cuernavaca: Pringle 6664 (US holo, B, CM, GH, K, L, M, MCU, MEXU, MO, NY, P, TAES).

Derivation (Clifford & Bostock 2007): L. aqua, water; -ica, belonging to. Growing in or close to water.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual. Culms 60–120 cm long, rooting from lower nodes. Ligule a ciliate membrane. Leaf-blades 10–20 cm long, 4–10 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, unilateral, 2–6 cm long. Central inflorescence axis 10–25 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 1.5–2 mm long, 0.5 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2 mm long, 0.66 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 3–3.2 mm long, membranous, grey, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins, less than two thirds length of lemma. Lemma surface pubescent, hairy at base. Lemma margins pubescent. Lemma apex emarginate or obtuse. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Central Mexico, Northeast Mexico, Southwest Mexico.
TDWG4. Morelos. Zacatecas. Guerrero, Jalisco, Michoacan, Nayarit.

Dinebra caudata (K.Schum.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Leptochloa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Leptochloa*).

TYPE from Tanzania. **Basionym or Replaced Name:** *Diplachne caudata* K. Schum., *Engl. Pflanzenw. Ost-Afr.* C 113 (1895). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tanzania, Ukira: Fischer 674 (B holo).

Recent Synonyms: *Leptochloa caudata* (K.Schum.) Snow, *Novon* 8:77 (1998).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms decumbent, 30–100 cm long, rooting from lower nodes. Ligule a ciliolate membrane, 0.75–1 mm long. Leaf-blades flat or convolute, 9–35 cm long, 2.5–6 mm wide, stiff, mid-green or grey-green. Leaf-blade surface scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 10–30, borne along a central axis, spreading or ascending, flexuous, unilateral, 4–10 cm long. Central inflorescence axis 10–40 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, lax. Spikelets solitary. Fertile spikelets pedicelled or sessile. Pedicels absent or present, filiform.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, compressed slightly, 6.2–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 0.7–1.8 mm long, 0.3–0.5 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse. Upper glume oblong, 2–3.8 mm long, 0.6–0.9 length of adjacent fertile lemma, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate or obtuse, mucronate.

Florets. Fertile lemma oblong, 3–4.3 mm long, membranous, mid-green or purple, without keel, 3 -veined, 0–3 -veined. Lemma midvein ciliate, hairy below. Lemma lateral veins close to margins. Lemma surface scabrous, rough above. Lemma margins pilose, hairy below. Lemma apex entire or dentate, 2 -fid, obtuse, mucronate. Palea 2 -veined. Palea keels scabrous. Palea surface pubescent, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 0.3–0.6 mm long. Caryopsis with adherent pericarp, ellipsoid or oblong, laterally compressed, plano-convex, 1.7–1.8 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West-central tropical Africa, East tropical Africa. Rwanda, DRC. Kenya, Tanzania, Uganda.

Dinebra chinensis (L.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Leptochloa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Leptochloa*), S-L Chen et al, *Flora of China* 22 (Poaceae) (2006) (as *Leptochloa*), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *Leptochloa*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *Leptochloa*).

TYPE from India. **Basionym or Replaced Name:** *Poa chinensis* L., *Sp. Pl.* 69 (1753). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: India: Osbeck (LINN holo).

Recent Synonyms: *Leptochloa chinensis* (L.) Nees, *Syll. Ratisb.* 1: 4 (1824).

Illustrations (Books): T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (262, Fig 98), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (424), C-C Hsu, *Taiwan Grasses* (1975) (491, Pl. 1406), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl. 890 & 891), H.J.Noltie, *The Grasses of Bhutan* (2000) (653, Fig. 32), H.B.Gilliland, *Grasses of Malaya* (1971) (74, Fig 9), H.Duistermaat, *Field Guide to the Grasses of Singapore* (2005) (87, Fig. 86), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (60), R.Pilger, *Die Natürlichen Pflanzenfamilien* 14d (1956) (43, Fig. 8), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 660), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:94(1980)).

Images: 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. -ense, denoting origin. From China.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Butt sheaths papery, pallid. Culms erect or geniculately ascending or decumbent, 50–150 cm long, without nodal roots or rooting from lower nodes. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blades flat or conduplicate, 25–50 cm long, 3–7.5 mm wide. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, ascending or erect, flexuous, unilateral, 2–13 cm long. Central inflorescence axis 20–60 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, lax, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic or oblong, laterally compressed, 2.1–3.2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume ovate, 0.6–1 mm long, 0.6–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic or oblong, 0.9–1.3 mm long, 0.9–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse.

Florets. Fertile lemma elliptic or oblong, 0.8–1.4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins close to margins. Lemma surface glabrous. Lemma margins pubescent. Lemma apex entire or dentate, 2 -fid, obtuse. Palea 2 -veined. Palea keels puberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid or oblong, isodiametric, plano-convex, 0.65–0.9 mm long.

$N = 20$ (2 refs TROPICOS). $2n = 40$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Kenya, Tanzania. Zimbabwe. Botswana, Limpopo, Swaziland, Kwazulu-Natal. China, Eastern Asia. China South Central, Hainan, China North-Central, China Southeast. Japan, Taiwan. Indian Subcontinent, Indo-China, Malesia, Papuasia. Bangladesh, Eastern Himalaya, India, Sri Lanka. Cambodia, Myanmar, Thailand, Vietnam. Borneo, Java, Lesser Sunda Is, Malaya, Singapore, Philippines, Sulawesi, Sumatra. New Guinea West Papua (Irian Jaya). New Guinea.

TDWG4. Shaanxi, Shandong. Anhui, Fujian, Guangdong, Guangxi, Henan, Hunan, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. Bhutan. Kerala. Tamilnadu, West Bengal.

Dinebra coerulescens (Steud.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Senegal. **Basionym or Replaced Name:** *Leptochloa coerulescens* Steud., *Syn. Pl. Gram.* 209. (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Senegal: Leprieur.

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (203, Fig. 128 as *L. coerulescens*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (133, Fig 43), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (103, Fig 43).

Derivation (Clifford & Bostock 2007): *L. caeruleo*, become bluish; Foliage glaucous.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, culms solitary. Culms decumbent, 50–100 cm long, 10–20 -noded, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blades 5–30 cm long, 1–8 mm wide. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, flexuous, unilateral, 2–8 cm long. Central inflorescence axis 5–25 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 0.75–1 mm long, 0.5–0.6 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 1.2–1.7 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex emarginate or obtuse, mucronate.

Florets. Fertile lemma oblong, 1.5–2 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins close to margins. Lemma surface glabrous. Lemma margins ciliate.

Lemma apex dentate, 2 -fid, obtuse. Palea 2 -veined. Palea keels puberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. West tropical Africa, West-central tropical Africa, Northeast tropical Africa, South tropical Africa, Western Indian ocean. Burkina, Ghana, Guinea-Bissau, Mali, Nigeria, Senegal, Sierre Leone. Central African Republic, Congo, Gabon, DRC. Ethiopia (inc. Eritrea), Sudan. Angola, Zambia. Madagascar.

Dinebra decipiens (R. Br.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of 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:** *Poa decipiens* R. Br., *Prodr.* 181 (1810). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Brown 6271*, Australia: Queensland: Port Curtis Distr.: Keppel Bay (BM; IT: E, K).

Recent Synonyms: *Leptochloa decipiens* (R. Br.) Stapf ex Maiden, *Agric. Gaz. N. S. Wales*, 20: 307 (1909).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (294), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004), 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. decipio*, deceive. Resembling another species, or in some other way deceptive.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–150 cm long. Culm-internodes distally pruinose or glabrous. Lateral branches lacking or sparse. Leaf-sheaths antrorsely scabrous, glabrous on surface or hirsute, with tubercle-based hairs. Ligule an eciliate membrane, 1.5–2 mm long. Leaf-blades 10–20 cm long, 3–5 mm wide. Leaf-blade surface scabrous, glabrous or hirsute.

Inflorescence. Inflorescence composed of racemes. Racemes 5–25, borne along a central axis, unilateral, 5–14.5 cm long. Central inflorescence axis 20–50 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present, 1–2 mm long.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume ovate, 1–1.8 mm long, 0.66–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acuminate. Upper glume obovate, 1.5–2.5 mm long, 0.75–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex obtuse or acute.

Florets. Fertile lemma elliptic or oblong, 2–2.8 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein eciliate or pubescent, hairy above. Lemma lateral veins close to margins. Lemma margins ciliolate or ciliate. Lemma hairs 1 mm long. Lemma apex emarginate or truncate or obtuse. Palea 2 -veined. Palea keels scaberulous, ciliate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with free soft pericarp, ellipsoid or oblong, dorsally compressed, 1–1.3 mm long, truncate or obtuse.

Distribution (TDWG). Continent. Europe (*), Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Queensland, New South Wales. New Caledonia.

TDWG4. North, Central, South East, Inland. Coast, Tablelands, Western Slopes, Western Plains.

Dinebra decipiens subsp. asthenes (Roem. & Schult.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Australia. **Basionym or Replaced Name:** *Leptochloa asthenes* (Roem. & Schult.) C.E.Hubb., *Kew Bull.* 1941, 26 (1941). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: : Based on *P. imbecilla* R.Br. ; Australia: Brown 6270 (K iso).

Recent Synonyms: *Leptochloa ciliolata* (Jedw.) S. T. Blake, *Contrib. Queensl. Herb.*, 14: 6 (1972).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (293).

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Cataphylls evident. Culms 16–65 cm long, wiry. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths antrorsely scabrous, glabrous on surface or pilose, with tubercle-based hairs. Ligule a ciliolate membrane, 0.8–1.5 mm long. Leaf-blades 4–8 cm long, 2–3 mm wide. Leaf-blade surface scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 5–20, borne along a central axis, ascending, unilateral, 5–16 cm long. Central inflorescence axis 4–15 cm long. Rhachis semiterete, scabrous on margins. Spikelet packing broadside to rhachis, contiguous or lax, regular, 2 -rowed. Raceme-bases filiform, 3–14 mm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–2.5 mm long, scabrous.

Fertile Spikelets. Spikelets comprising 3–4(–7) fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.5–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume ovate, 0.8–1.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acute. Upper glume ovate, 1.5–2 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex emarginate, mucronate.

Florets. Fertile lemma oblong or ovate, 1.5–2.3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous, pubescent. Lemma lateral veins close to margins. Lemma surface scaberulous, rough above. Lemma margins pubescent. Lemma apex emarginate, mucronate. Palea 2 -veined. Palea surface glabrous or puberulous, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with free soft pericarp, ellipsoid or oblong, isodiametric, trigonous, 1 mm long, obtuse.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland, New South Wales.

Central, South East. Coast, Tablelands, Western Slopes.

Dinebra decipiens* subsp. *peacockii (Maid. & Betche) Domin. *Ann. Bot.* 109: 1326 (2012).

Regarded by K as a synonym (*L. decipiens*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Australia. **Basionym or Replaced Name:** *Diplachne peacockii* Maiden & Betche, *Agric. Gaz. New South Wales* 15: 925, with plate (1904)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Maiden & Boorman s.n.*, 4 Dec 1904, Australia: New South Wales: Coolabah (NSW-126631; IT: BM, BRI, K, W). LT designated (as holotype) by Lazarides, *Brunonia* 3: 263 (1980).

Recent Synonyms: *Leptochloa peacockii* (Maid. & Betche) Domin, *Biblioth. Bot.* 1 v. 379 (1915).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (294).

Illustrations (Journals): *Darwiniana* (33: 247, Fig.3 (1992)).

Derivation (Clifford & Bostock 2007): in honor of Robert William Peacock (c.1869–1949) Australian agriculturalist.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 50–90 cm long. Ligule an eciliate membrane. Leaf-blades 8–20 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 10–20, borne along a central axis, flexuous, unilateral, 3–6 cm long. Central inflorescence axis 15–35 cm long. Rhachis angular. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary or in pairs. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 6–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume lanceolate, 0.75–1 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume oblong, 1.5 mm long, 0.75–1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 1–4.7 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma margins pubescent. Lemma apex dentate, 2 -fid, obtuse. Palea 2 -veined. Palea keels scaberulous, ciliate, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Distribution (TDWG). **Continent.** Europe (*), Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Queensland, New South Wales.

Leptochloa divaricatissima (S.T.Blake) P.M.Peterson & N.Snow. *Phytoneuron* 2012–71:1 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of 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:** *Leptochloa divaricatissima* S. T. Blake, *Contrib. Queensl. Herb.*, 14: 8 (1972). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *S.T. Blake 10517*, Australia: Queensland: Goondiwindi (BRI-131665–6; IT: CANB, K, MO, NSW, PRE).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (294).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);

Derivation (Clifford & Bostock 2007): *L. divarico*, spread out; *-issima*, most. Panicle, large and diffuse.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–60 cm long. Culm-internodes distally glabrous or pubescent. Lateral branches lacking or sparse. Leaf-sheaths glabrous on surface or pilose, with simple hairs or tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 3–24 cm long, 1.5–4 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, spreading or deflexed, unilateral, 10–20 cm long. Central inflorescence axis 15–60 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, contiguous or lax, regular, 2 -rowed. Raceme-bases filiform, 20–45 mm long, glabrous or pilose, hairy at base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.8–2 mm long.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume ovate, 1–1.2 mm long, 0.66–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume oblong or ovate, 1–1.8 mm long, 0.5–0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 2–2.4 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below. Lemma lateral veins close to margins. Lemma margins ciliate. Lemma apex emarginate, muticous or mucronate. Palea 2 -veined. Palea surface pubescent, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with free soft pericarp, oblong, isodiametric, trigonous, 0.9–1.1 mm long, obtuse.

Distribution (TDWG). **Continent.** Europe (*), Australasia.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** Queensland, New South Wales.

TDWG4. Central, South East. Western Plains.

Dinebra haareri (Stapf & Hubbard) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Tanzania. **Basionym or Replaced Name:** *Heterocarpha haareri* Stapf & C.E. Hubb., *Bull. Misc. Inform. Kew* 1929: 263. 1929

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *A. Haarer 1470*, Aug 1928, Tanzania: Pare District: Kihurio (K; IT: US-1447438).

Recent Synonyms: *Drake-Brockmania haareri* (Stapf & Hubbard) S.M. Phillips, *Kew Bull.*, 29(2): 268 (1974).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3456 (1947) as *Heterocarpha*).

Derivation (Clifford & Bostock 2007): in honor of Alec Ernest Haarer (1894–1970) English-born Tanzanian plant ecologist.

Classification. Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 15–63 cm long, rooting from lower nodes. Ligule an eciliate membrane, 1–1.5 mm long, lacerate, truncate. Leaf-blades 3–18 cm long, 3.5–9.5 mm wide, glaucous. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes 5–10, borne along a central axis, deflexed or ascending, oblong to ovate, unilateral, 1.5–3.5 cm long. Central inflorescence axis 3.5–11 cm long. Rhachis deciduous from axis, flattened. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets spreading, solitary. Fertile spikelets sessile. Pedicels absent.

Fertile Spikelets. Spikelets comprising 8–18 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 6–14 mm long, falling entire, deciduous with accessory branch structures, readily shedding fertile florets. Rhachilla internodes suppressed between florets.

Glumes. Glumes dissimilar, shorter than spikelet, recurved at apex. Lower glume lanceolate, 1.7–3.5 mm long, 0.5 length of upper glume, chartaceous, 1-keeled, 1–3 -veined. Lower glume apex acute, mucronate. Upper glume lanceolate, 3.8–6.8 mm long, 1–1.5 length of adjacent fertile lemma, 1-keeled, 7–9 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate.

Florets. Fertile lemma elliptic in profile, 3.6–4.7 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below. Lemma margins pubescent, hairy below. Lemma apex obtuse or acute, mucronate. Palea straight, 2 -veined. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.7–2.4 mm long. Caryopsis with tardily free pericarp, ellipsoid, isodiametric, trigonous, 1.2 mm long.

Distribution (TDWG), Continent. Africa.

Country /Province /State. East tropical Africa. Kenya, Tanzania.

Dinebra ligulata (Lazarides) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

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:** *Leptochloa ligulata* Lazarides, *Brunonia* 3:259 (1980). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: Queensland: North Kennedy District: S of Charters Towers, ca. 20.26S 146.13E, 25 Apr. 1945, *Blake & Webb 15751* (HT: BRI; IT: CANB).

Illustrations (Books): K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (450, Fig 80).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);.

Derivation (Clifford & Bostock 2007): *L. ligula*, small tongue; -ata, possessing. Ligule conspicuous.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 60–120 cm long. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths longer than adjacent culm internode, antrorsely scabrous, glabrous on surface. Ligule a ciliolate membrane, 4–5 mm long. Leaf-blades 15–35 cm long, 3–7 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, ascending, unilateral, 7–15 cm long. Central inflorescence axis 30–50 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, crowded or contiguous, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume ovate, 0.6 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 0.9 mm long, 0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex emarginate or obtuse, muticous or mucronate.

Florets. Fertile lemma elliptic or ovate, 1 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein thickened, pubescent. Lemma lateral veins close to margins. Lemma surface scaberulous, rough above. Lemma margins pubescent. Lemma apex emarginate, mucous or mucronate. Palea 2 -veined. Palea keels pubescent. Palea surface puberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with free soft pericarp, ellipsoid, isodiametric, 0.6 mm long, rugose, obtuse.

Distribution (TDWG). Continent. Australasia (*).

Country /Province /State. Australia. Queensland (*).

TDWG4. Central, South East.

Dinebra marquisensis (F. Brown) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Marquesas. **Basionym or Replaced Name:** *Eragrostis marquisensis* Forest Brown, *Bull. Bishop Mus., Honolulu*, No. 84, 81 (1931). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Marquesas, Fatuhiva: Brown 969.

Recent Synonyms: *Leptochloa marquisensis* (F. Brown) P.M. Peterson & E.J. Judziewicz, *Taxon*, 39(4): 659: (1990).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From the Marquesas Islands.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rootstock evident. Culms erect, 20–40 cm long. Leaves mostly basal. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades 10–40 cm long, 4–8 mm wide. Leaf-blade surface scabrous, rough adaxially, glabrous. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes borne along a central axis, ascending, unilateral, 2–3 cm long. Central inflorescence axis 5–7 cm long. Rhachis semiterete, scabrous on surface, puberulous on surface. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile or pedicelled. Pedicels present, 1–2 mm long.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 2–3 mm long, 0.66–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute, mucronate or awned, 1 -awned, awn 0.2–0.5 mm long. Upper glume lanceolate, 3 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma ovate, 3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma lateral veins close to margins. Lemma margins ciliolate. Lemma apex acuminate, awned, 1 -awned. Principal lemma awn 0.5–1 mm long overall. Palea 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. South-central Pacific. Marquesas.

Dinebra nealleyi (Vasey) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Leptochloa nealleyi* Vasey, *Bull. Torrey Bot. Club*, 12: 7. (1885). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G.C. Nealley s.n.*, 1884, USA: Texas (US-78808, IT: MCU, NY-79814).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (60), F.W.Gould, *The Grasses of Texas* (1975) (231, Fig. 121), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (106, Fig. 64).

Derivation (Clifford & Bostock 2007): in honor of Greenleaf Cilley Nealley (1846–96) United States plant collector.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 60–150 cm long. Lateral branches lacking or sparse. Leaf-sheaths keeled, scaberulous, glabrous on surface. Ligule an eciliate membrane, 1–3 mm long, lacerate, truncate. Leaf-blades flat or involute, 3–10 mm wide. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 25–75, borne along a central axis, simply spaced or the lowest whorled, erect or ascending, unilateral, 2–6 cm long. Central inflorescence axis 20–45 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 1–1.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acute. Upper glume lanceolate, 1–1.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 1–1.6 mm long, membranous, keeled, lightly keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma margins pubescent. Lemma apex emarginate or obtuse. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, oblong, 1 mm long. Embryo 0.6 length of caryopsis.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. Southwestern USA, South-central USA, Southeastern USA. Arizona. Texas. Mesoamerica, Caribbean. Cuba.

Dinebra neesii (Thw.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

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).

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Cynodon neesii* Thwaites, *Enum. Pl. Zeyl.* 371 (1864). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Thwaites C.P. 3749*, Ceylon: Eastern Prov.: Trincomalee (PDA).

Recent Synonyms: *Leptochloa neesii* (Thw.) Benth., *Journ. Linn. Soc.* 19: 108 (1881).

Illustrations (Books): K.M.Mathew, *Further Illustrations on the Flora of Tamilnadu Carnatic* (1988) (pl.796), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (442, Fig Fig 79), 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 Christian Gottfried Daniel Nees von Esenbeck (1766–1858) German botanist.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual or perennial, short-lived, caespitose. Culms 60–105 cm long. Culm-internodes terete or elliptical in section. Culm-nodes glabrous. Lateral branches sparse. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 2–4 mm long. Leaf-blades linear or lanceolate, flat or involute, 10–20 cm long, 2–4 mm wide. Leaf-blade surface scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Peduncle scaberulous above. Racemes numerous, borne along a central axis, straight or arcuate, unilateral, 2.5–9 cm long. Central inflorescence axis 15–45 cm long. Rhachis semiterete, scaberulous on margins. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 1–1.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets. Lower glume lanceolate, 0.9–1.5 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex obtuse to acuminate. Upper glume elliptic, 1–1.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex truncate to acuminate.

Florets. Fertile lemma elliptic, 1–1.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scaberulous, pubescent. Lemma lateral veins close to margins. Lemma surface glabrous. Lemma margins pubescent. Lemma apex entire, acute. Palea 2 -veined. Palea surface pubescent, hairy on back.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, isodiametric, biconvex, without sulcus, 0.5–0.75 mm long, light brown, obtuse. Embryo 0.5 length of caryopsis.

Distribution (TDWG). Continent. Tropical Asia, Australasia.

Country /Province /State. Indian Subcontinent, Indo-China, Malesia, Papuasia. India, Sri Lanka. Myanmar, Vietnam. Java, Moluccas. **Australia.** Western Australia, Northern Territory, Queensland.

TDWG4. Kimberley, Darwin & Gulf, Victoria R & Barkly Tableland. North.

Dinebra panicea (Retz.) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of 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 China. **Basionym or Replaced Name:** *Poa panicea* Retz., *Observ. Bot.* 3: 11 (1783). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: E China, *Honoratiss. Bladh.* (HT: LD).

Recent Synonyms: *Leptochloa panicea* (Retz.) Ohwi, *Bot. Mag., Tokyo*, 55: 311 (1941).

Illustrations (Books): R.M.Phill, F.T.E.A., *Gramineae* (2(1974):280, Fig.76), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (122, Fig 93), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (198, Fig 120), L.Boulos, *Flora of Egypt* 4 (2005) (246, Pl. 72), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (422), C-C Hsu, *Taiwan Grasses* (1975), K.M.Matthew, Further Illustrations on the *Flora of Tamilnadu Carnatic* (1988) (pl.797), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (57), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 14, Fig. 3 (2001)), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 650), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:96(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. -ea, resembling. Resembling *Panicum*..

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Butt sheaths herbaceous, green. Culms decumbent, 25–110 cm long. Leaf-sheaths pilose. Ligule an eciliate membrane. Leaf-blades 3–25 cm long, 1.5–7 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy on both sides, with tubercle-based hairs. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, straight, unilateral, 4–11 cm long. Central inflorescence axis 20–30 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 1.9–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 0.7–1.5 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume elliptic, 0.9–1.6 mm long, 1.1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse, mucronate.

Florets. Fertile lemma oblong, 0.8–1.2 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins close to margins. Lemma surface puberulous. Lemma margins pubescent. Lemma apex dentate, 2 -fid, obtuse. Palea 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, oblong, 0.2–0.3 mm long. Caryopsis with adherent pericarp, ellipsoid, isodiametric, trigonous, 0.5 mm long, dark brown.

$N = 10$ (3 refs TROPICOS), or 20 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia, Pacific, North America, South America.

Country /Province /State. Northern Africa, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean. Egypt. Ghana. Somalia, Sudan. Kenya, Tanzania, Uganda. Malawi, Mozambique, Zambia, Zimbabwe. Namibia, Limpopo, Mpumalanga, Swaziland, Kwazulu-Natal. Madagascar. **China, Eastern Asia.** China South Central, Hainan, China North-Central, China Southeast. Japan, Nansei-Shoto, Ogosawara-shoto, Taiwan. **Indian Subcontinent, Indo-China, Malesia, Papuasia.** Bangladesh, India, Pakistan, Sri Lanka. Myanmar, Thailand, Vietnam. Java, Lesser Sunda Is, Malaya, Philippines, Sulawesi. New Guinea. **Australia.** Queensland.

Northwestern Pacific. Marianas. **North-central USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Kansas, Missouri, Oklahoma. Arizona, California, Nevada. New Mexico, Texas. Alabama, Arkansas, Florida, Georgia, Louisiana, 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. Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North. Argentina Northwest.

TDWG4. Shaanxi. Anhui, Fujian, Guangdong, Henan, Jiangsu, Jiangxi, Zhejiang. Guizhou, Hubei, Sichuan, Yunnan. North, Central, South East, Inland. Jujuy, Salta, Tucuman. Chaco, Formosa, Misiones, Santa Fe. Mexico State, Morelos, Puebla. Coahuila, Chihuahua, Neuvo Leon, Queretaro, Tamaulipas, Zacatecas. Veracruz. Sinaloa, Sonora. Guerrero, Jalisco, Michoacan, Nayarit. Campeche, Chiapas, Tabasco, Yucatan.

Dinebra panicea subsp. brachiata (Steud.) P.M.Peterson & N.Snow. *Rev. Gram.* i. 91. (1829).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Eleusine mucronata* Michx., *Fl. Bor.-Amer.* 1: 65 (1803). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Michaux s.n.*, USA: Illinois (P-MICH).

Recent Synonyms: *Leptochloa filiformis* (Pers.) Beauv., *Agrost.* 71. (1812). *Leptochloa mucronata* (Michx.) Kunth, *Rev. Gram.* 1: 91. (1829).

Illustrations (Books): T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (179, Fig. 27 as *L. filiformis*), F.W.Gould, *The Grasses of Texas* (1975) (233, Fig. 122 as *L. filiformis*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (103, Fig. 60 as *L. filiformis*), S.A.Renvoize, *Gramineas de Bolivia* (1998) (298, Fig 61), S.A.Renvoize, *The Grasses of Bahia*, 1984 (81, Fig. 29, as *L. filiformis*), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (376, Fig.131 as *L. filiformis*), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (305, Fig 110 as *L. filiformis*), E.Hafliger & E.Schultz, *Grass Weeds, CIBA-GEIGY* (2:90 (1980) as *L. filiformis*).

Derivation (Clifford & Bostock 2007): *L. mucro*, sharp point; -ata, possessing. With glumes or lemmas contracted into a short hard point or bifid and shortly awned from between the teeth.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 10–18 cm long. Leaf-sheaths pilose, with tubercle-based hairs. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades 3–25 cm long, 1–10 mm wide. Leaf-blade surface pilose, with tubercle-based hairs. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, spreading or erect, flexuous, unilateral, (2–)3–8(–15) cm long. Central inflorescence axis 8–35 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, lax, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets obovate, laterally compressed, 1.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume linear or lanceolate, 1.2–1.5 mm long, 0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear or lanceolate, 1.5–1.8 mm long, 1.2–1.5 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 1–1.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins close to margins. Lemma surface glabrous. Lemma margins pubescent. Lemma apex entire, truncate or obtuse. Palea 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, ovoid or obovoid, 0.7–0.8 mm long.

Distribution (TDWG). Continent. Africa, Tropical Asia, Australasia, North America, South America.

Country /Province /State. **West tropical Africa.** Nigeria. **Malesia.** Philippines. **Australia.** Queensland. **North-central USA, 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.** Bermuda, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Windward Islands, Puerto Rico, Trinidad-Tobago. Bolivia, Ecuador, Galapagos. Brazil Northeast.

TDWG4. Mexico State, Morelos, Puebla. Coahuila, Chihuahua, Neuvo Leon, San Luis Potosi, Tamaulipas. Veracruz. Baja California, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas, Yucatan.

Dinebra panicoides (Presl) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. **Basionym or Replaced Name:** *Megastachya panicoides* J. Presl, *Reliq. Haenk.* 1(4–5): 283 (1830)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, Mexico: Guerrero: Acapulco (PR; IT: LE-TRIN-2121.02, MO-2109566, MO-2109567 (line drawing), US-78688 (fragm.)).

Recent Synonyms: *Leptochloa panicoides* (Presl) Hitchcock, *Am. Journ. Bot.* 21: 137 (1934).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (60).

Illustrations (Journals): *Contrib. U.S.Nat. Herbarium* (2 (2): 867, Fig.2 (2008)), *Ruizia* (13:269, Fig 31j-k (1993)).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Panicum*, usually with respect to form of the inflorescence or spikelet.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 40–100 cm long. Lateral branches ample. Leaf-sheaths without keel, smooth, glabrous on surface. Ligule an eciliate membrane, 1–4 mm long, erose, truncate. Leaf-blades flat or involute, 6–12 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes few or numerous, 4–90, borne along a central axis, ascending, unilateral, 3–8 cm long. Central inflorescence axis 10–25 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile or pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or ovate, laterally compressed, 4–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 1.2–1.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume elliptic, 1.6–2 mm long, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex acute or acuminate.

Florets. Fertile lemma oblong, 2–2.8 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma margins pubescent, hairy below. Lemma apex dentate, 2 -fid, acute, mucronate. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

$2n = 20$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. **North-central USA, South-central USA, Southeastern USA, Mexico.** Missouri. Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Tennessee. Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Western South America, Brazil.** Costa Rica, Guatemala, Honduras. Colombia, Peru. Brazil West Central, Brazil North.

TDWG4. Coahuila, Chihuahua. Baja California, Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Tabasco.

Dinebra perrieri (A. Camus) Bosser. *Adansonia, n. s.*, 8: 515 (1968).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Madagascar. **Basionym or Replaced Name:** *Craspedorhachis perrieri* A.Camus, *Not. Syst., Paris*, 15: 134 (1956). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: HT: *Perrier de la Bathie 19017*, Madagascar: SW, near Tulear (P).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (79, Fig 19).

Derivation (Clifford & Bostock 2007): in honor of Joseph Marie Henri Alfred Perrier de la Bbthie (1872–1958) French botanist.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms 30–80 cm long. Ligule a ciliolate membrane, 1.5–2 mm long. Leaf-blades 12–15 cm long, 5–8 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 4–20, borne along a central axis, deflexed or spreading, unilateral, 5–18 cm long. Central inflorescence axis 10–40 cm long. Rhachis persistent. Spikelet packing broadside to rhachis. Spikelets appressed, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 3.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma. Lower glume lanceolate, 3.5–5 mm long, 1 length of upper glume, coriaceous, 1-keeled, 1–3 -veined. Lower glume apex acute. Upper glume lanceolate, 3.5–5 mm long, 1.5–2.5 length of adjacent fertile lemma, coriaceous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 2 mm long, membranous, keeled, lightly keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below. Lemma lateral veins close to margins. Lemma margins pubescent, hairy below. Lemma apex obtuse. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Western Indian ocean. Madagascar.

Dinebra polycarpa S.M. Phillips. *Kew Bull.*, 28(3): 416 (1974).

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: Uganda: 7 mi [11 km] W of Moroto, Aug. 1954, *Langdale-Brown 1574* (HT: K; IT: EA).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk. polys, many; karpheos, dry stalk. Lower spikelets on each spike replaced by short deciduous branchlets.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 38–120 cm long. Leaf-sheaths eglandular. Ligule a ciliolate membrane, 0.75–1.8 mm long, lacerate. Leaf-blades 5–16 cm long, 4–9.5 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes few, 10–32, borne along a central axis, spreading, linear, unilateral, 2.5–7 cm long, bearing many spikelets, secondarily branched. Central inflorescence axis 13–20 cm long. Rhachis persistent, with separately deciduous secondary branchlets, wingless, angular. Spikelet packing broadside to rhachis. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels absent.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 3.2–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, parallel to lemmas. Lower glume lanceolate, 3.1–5 mm long, 0.9–1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 3.1–5 mm long, 2.5–3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma ovate, 1.3–1.6 mm long, membranous, keeled, lightly keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy all along. Lemma lateral veins close to margins. Lemma margins pubescent, hairy all along. Lemma apex dentate, 2 -fid, mucronate. Palea 0.8–0.9 length of lemma, 2 -veined. Palea keels pubescent. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, isodiametric, trigonous, 0.8–1 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Ethiopia (inc. Eritrea). Kenya, Uganda.

Dinebra retroflexa (Vahl.) Panz. *Denkschr. Acad. Muench.* 1813, 270 (1814).

Accepted by: R.J.Soreng et al., *Catalogue of 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).

TYPE from India. **Basionym or Replaced Name:** *Cynosurus retroflexus* Vahl, *Symb. Bot.* 2: 20 (1791). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *La Mark s.n.*, India (C).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (196, Fig. 118), R.M.Phillips, F.T.E.A., *Gramineae* (2(1974):275, Fig.75), G.V.Pope et al., *Flora Zambesiaca* 10 (2(1999):46, T. 21 as var *condensta*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (185, Fig 160), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (116, Fig 69), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 384), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (107, Fig 45 as var. *condensata*), L.Boulos, *Flora of Egypt* 4 (2005) (251, Pl. 74), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (176, Fig 91 as var *condensta*), N.L.Bor, *Gramineae* in K.H.Rechinger, *Flora Iranica*. No. 70/30 (1970), N.L.Bor, *Gramineae* in *Flora of Iraq* (1968) (433, Pl. 163), K.M.Matthew, Illustrations on the *Flora of Tamilnadu Carnatic* (1982) (Pl. 849), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (80, Fig 10), J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983) (200), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (179, Fig. 27), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (321, Fig 56), 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) (64), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 661), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:60(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. retro, backwards; flexus, bend. Inflorescence branches reflexed.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms 15–112 cm long. Leaf-sheaths glandular. Ligule an eciliate membrane or a ciliolate membrane, 1.2–1.6 mm long, lacerate. Leaf-blades 4.5–28 cm long, 4–8 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, deflexed or spreading, linear or oblong or cuneate, unilateral, 0.6–5 cm long, bearing few fertile spikelets or many spikelets, bearing 2–20 fertile spikelets on each, simple. Central inflorescence axis 8–34 cm long. Rhachis deciduous from axis, narrowly winged, flattened. Spikelet packing broadside to rhachis. Spikelets appressed, solitary. Fertile spikelets sessile. Pedicels absent.

Fertile Spikelets. Spikelets comprising 1–3 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets cuneate, laterally compressed, 5.7–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, firmer than fertile lemma, recurved at apex. Lower glume elliptic, 6.1–8.2 mm long, 0.9–1 length of upper glume, coriaceous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex caudate. Upper glume elliptic, 6.1–8.2 mm long, 3 length of adjacent fertile lemma, coriaceous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex caudate.

Florets. Fertile lemma ovate, 2.1–2.9 mm long, membranous, keeled, lightly keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below. Lemma lateral veins close to margins. Lemma margins pubescent, hairy below. Lemma apex emarginate or acute, mucronate. Palea 0.8–0.9 length of lemma, 2 -veined. Palea keels pubescent. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, ellipsoid, isodiametric, trigonous, 1 mm long.

N = 10 (1 ref TROPICOS).

Distribution (TDWG). Continent. Africa, Temperate Asia, Tropical Asia, Australasia (*), North America.

Country /Province /State. Northern Africa, 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. Nigeria, Senegal. Eritrea, Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania, Uganda. Angola, Mozambique, Zambia, Zimbabwe. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Eastern Cape. St Helena. Mauritius (*), Madagascar. Western Asia, Arabian Peninsula, China, Eastern Asia. Iraq. Kuwait, Oman. China South Central, China Southeast. Indian Subcontinent, Indo-China, Malesia. Bangladesh, India, Pakistan. Andaman Is. Lesser Sunda Is, Malaya. Australia. Queensland (*). Southwestern USA, Southeastern USA. California. North Carolina, Virginia.

TDWG4. Fujian. Yunnan. Madhya Pradesh, Maharashtra, Rajasthan, Tamilnadu. Central, South East, Inland.

Dinebra scabra (Nees) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of 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. **Basionym or Replaced Name:** *Leptochloa scabra* Nees, *Agrost. Bras.* 435. (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *K.F.P. von Martius s.n.*, Brazil: Pará (M; IT: BAA-1514 (fragm. ex M), US-88699 (fragm. ex M)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (60), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (105, Fig. 63), S.A.Renvoize, *Gramineae de Bolivia* (1998) (298, Fig. 61), J.A.Steyermark et al, *Flora of the Venezuelan Guayana* Vol. 8 (2004) (146, Fig. 102), W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (305, Fig. 110), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 17, Fig. 3 (2001)), E.Judziewicz, *Flora of the Guianas*, 187. *Poaceae* (1990) (313, Fig. 55), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:97(1980)).

Illustrations (Journals): *Darwiniana* (33: 240, Fig.2 (1992) as *Diplachne*), *Ruizia* (13:269, Fig 311-m (1993)).

Derivation (Clifford & Bostock 2007): L. rough or gritty to the touch. Plants with rough leaf-blades, spikelets or stems.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 90–100 cm long, 3–6 mm diam. Culm-nodes constricted, glabrous. Leaf-sheaths keeled, glabrous on surface. Ligule a fringe of hairs, 1.5–3 mm long. Leaf-blades 25–50 cm long, 6–14 mm wide. Leaf-blade surface scaberulous, glabrous. Leaf-blade margins scabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, unilateral, 7–10 cm long. Central inflorescence axis 20–40 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.7–4.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 0.7–1.1 mm long, 0.66 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume ovate, 1.2–1.7 mm long, 0.75–0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma oblong or ovate, 1.4–2.3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein ciliate, hairy below. Lemma lateral veins close to margins. Lemma margins ciliate, hairy below. Lemma apex acuminate. Palea 1 length of lemma, 2 -veined.

Flower and Fruit. Anthers 3, 0.2–0.3 mm long. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Tropical Asia, North America, South America.

Country /Province /State. Papuasias. New Guinea. **South-central USA, Southeastern USA, Mexico.** Texas. Alabama, Louisiana. 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. Dominican Republic, Haiti, Jamaica, Puerto Rico, Trinidad-Tobago. French Guiana, Guyana, Surinam, Venezuela. Bolivia, Colombia, Ecuador, Peru. Brazil West Central, Brazil Northeast, Brazil North.

TDWG4. Para, Amapa, Amazonas, Acre, Rondonia, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe. Formosa. Chihuahua, Queretaro. Veracruz. Sinaloa, Sonora. Jalisco, Michoacan, Oaxaca. Chiapas, Tabasco, Yucatan.

Dinebra simoniana (N. Snow) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

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. **Basionym or Replaced Name:** *Leptochloa simoniana* N.W. Snow, *Novon* 10(3): 238–240, f. 1 (2000). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *B.M.*

Waterhouse & J.F. Grimshaw BMW 4862, 31 Mar 1998, Australia: Queensland: Cook District: Boigu Island, a mud cay,, Torres Strait, 9:13.29'S, 142:13.26'E, three clumps of this grass growing close together at rubbish dump, beyond far western end of airstrip. Not observed elsewhere in community area not previously on island (BRI; IT: BO, BRI, CANB, GREE, K, L, LAE, MEL, MO-04968440, NAQS, NSW, QRS).

Illustrations (Journals): *Novon* (10: 240 Fig.1 (2000)).

Derivation (Clifford & Bostock 2007): In honor of Bryan Kenneth Simon (1943-) South African born Australian botanist.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 90–140 cm long, 2.5–4 mm diam. Culm-internodes terete or elliptical in section, thin-walled, 6–20 cm long, distally glabrous. Culm-nodes glabrous. Leaf-sheaths scaberulous, glabrous on surface or pilose, with tubercle-based hairs, outer margin glabrous. Ligule an eciliate membrane, 3–4 mm long, erose, truncate. Leaf-blades 20–35 cm long, 3.5–91 mm wide. Leaf-blade surface scabrous, rough on both sides.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 65–75, borne along a central axis, straight, unilateral, 5–10 cm long. Central inflorescence axis 35–65 cm long. Rhachis semiterete, scabrous on surface, scabrous on margins. Spikelet packing broadside to rhachis, regular, 2 -rowed. Raceme-bases glabrous. Spikelets solitary. Fertile spikelets sessile. Pedicels present, 0.5–1 mm long.

Fertile Spikelets. Spikelets comprising 3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–3.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus bearded or woolly. Floret callus hairs 0.33–0.5 length of lemma.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume ovate, 1.6–2.1 mm long, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1.8–2.4 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume margins scabrous. Upper glume apex acute or acuminate.

Florets. Fertile lemma ovate, 2.3–2.7 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma surface pubescent, hairy below, hairy on back or on veins. Lemma margins pubescent. Lemma apex emarginate or acute, mucicous or mucronate. Palea 0.66 length of lemma, hyaline, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, 0.3–0.4 mm long. Anthers 3, 0.5–0.6 mm long. Caryopsis with adherent pericarp, ellipsoid or ovoid, 1.2–1.3 mm long.

Distribution (TDWG). Continent. Tropical Asia and Australasia.

Country /Province /State. Papuaia. New Guinea. **Australia.** Queensland (*).

TDWG4. North.

Dinebra somalensis (Stapf) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Somalia. **Basionym or Replaced Name:** *Drake-Brockmania somalensis* Stapf, *Kew Bull.* 1912, 197 (1912). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Somalia, Bulhar: Drake-Brockman 616 (K syn); Somalia, Bulhar: Drake-Brockman 617 (K syn); Somalia, Bulhar: Drake-Brockman 646 (K syn); Somalia, Bulhar: Drake-Brockman 647 (K syn).

Illustrations (Books): R.M.Phill, F.T.E.A., *Gramineae* (2(1974):185, Fig.58), S.Phillips, *Poaceae* (Gramineae) in I.Hedberg & S.Edwards, *Flora of Ethiopia and Eritrea* (1995) (109, Fig 47), T.A.Cope, in M.Thulin, *Poaceae* (Gramineae). *Flora of Somalia* (1995) (177, Fig 93).

Illustrations (Journals): *Hooker's Icones Plantarum* (t.3455 (1947)).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Somalia.

Classification. Subfamily Chloridoideae. Tribe: Chloridoideae incertae sedis.

Habit, Vegetative Morphology. Annual, mat forming. Stolons present. Culms prostrate, 5–15 cm long, without nodal roots or rooting from lower nodes. Ligule an eciliate membrane, 0.7–1 mm long, lacerate, truncate. Leaf-blades 1.5–9.5 cm long, 2.5–4.5 mm wide. Leaf-blade surface hispid, sparsely hairy. Leaf-blade apex acute.

Inflorescence. Inflorescence composed of racemes. Racemes 2–6, borne along a central axis, closely spaced, not compacted or in a head, deflexed or spreading, oblong to ovate, unilateral, 0.7–1.7 cm long. Central inflorescence axis 0.3–3 cm long. Rhachis deciduous from axis, flattened. Spikelet packing broadside to rhachis, crowded, regular, 2 -rowed. Spikelets spreading, solitary. Fertile spikelets sessile. Pedicels absent.

Fertile Spikelets. Spikelets comprising 5–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile.

Spikelets oblong or cuneate, laterally compressed, compressed strongly, 6–11 mm long, falling entire, deciduous with accessory branch structures, readily shedding fertile florets. Rhachilla internodes suppressed between florets.

Glumes. Glumes dissimilar, exceeding apex of florets or reaching apex of florets or shorter than spikelet, recurved at apex. Lower glume lanceolate, 2.9–4 mm long, 0.5 length of upper glume, chartaceous, 1-keeled, 1–5 -veined. Lower glume apex acute, mucronate. Upper glume lanceolate, 5–8 mm long, 1.2–1.3 length of adjacent fertile lemma, 1-keeled, 11–17 -veined. Upper glume lateral veins ribbed. Upper glume apex acuminate.

Florets. Fertile lemma ovate in profile, 4–7 mm long, chartaceous, keeled, 5–7 -veined, more than 3-veined. Lemma midvein pubescent, hairy below. Lemma margins pubescent, hairy below. Lemma apex acute, mucronate or mucronate. Palea bowed outwards, 2 -veined. Palea keels winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, oblong, 0.4–1.2 mm long. Caryopsis with tardily free pericarp, ellipsoid, isodiametric, trigonous, 1.2–1.6 mm long. Embryo 0.4–0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Africa.

Country /Province /State. Northeast tropical Africa, East tropical Africa. Ethiopia (inc. Eritrea), Somalia, Sudan. Kenya, Tanzania.

Dinebra southwoodii (N. Snow & B.K. Simon) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1326 (2012).

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:** *Leptochloa southwoodii* N. Snow & B.K. Simon, *Austrobaileya*, 5(1): 138 (1997). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: A greenhouse-grown specimen based on seed collected from Snow & Simon 7364, Queensland, Darling Downs District, along Surat Developmental Road, 18 km W of its junction with Leichardt Highway, in brigalow remnants, common, with *Leptochloa divaricatissima*, L. aff. *fusca*, and *Acacia harpophylla*, clay soil, GPS 27.22.50S 150.00.37E, *N. s.n.ow 7401* (HT: BRI; IT: MO, CANB).

Illustrations (Books): No illustration found (BKS).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002); (*Austrobaileya* 5:139, Fig.1 & 140, Fig.2 (1997)).

Derivation (Clifford & Bostock 2007): From Southwood National Park, Queensland, Australia.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect or geniculately ascending, 137–170 cm long, 4 -noded. Culm-internodes terete, thin-walled, distally glabrous. Culm-nodes glabrous. Lateral branches lacking or sparse. Leaf-sheaths striately veined, pilose, with tubercle-based hairs. Ligule an eciliate membrane, 3–5.5 mm long, lacerate. Leaf-blades 25–55 cm long, 6–12.5 mm wide. Leaf-blade surface scabrous, rough on both sides, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, ascending, unilateral, 8–17.5 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, crowded or contiguous, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3.5–4.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.4–0.5 mm long. Floret callus glabrous or sparsely hairy.

Glumes. Glumes persistent, shorter than spikelet. Lower glume linear or ovate, 0.8–1.3 mm long, 0.6–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex obtuse or acute. Upper glume elliptic or ovate or obovate, 1.2–1.7 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent.

Florets. Fertile lemma elliptic or obovate, 1.5–2 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins close to margins. Lemma margins pubescent. Lemma apex emarginate or truncate or obtuse. Palea elliptic, 1 length of lemma, 2 -veined. Palea keels puberulous. Palea surface puberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.2 mm long. Caryopsis ellipsoid or obovoid, isodiametric, 0.8 mm long, rugose.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Queensland.

TDWG4. South East.

Dinebra squarrosa (Pilger) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1327 (2012).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Tanzania. **Basionym or Replaced Name:** *Leptochloa squarrosa* Pilger, *Engl. Jahrb.* 14: 210 (1910). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Tanzania, Sigi valley: Herb. Amani 2565 ; Tanzania, Usambara Mts.: Volkens 79 (B syn).

Illustrations (Books): J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (95, Fig 26).

Derivation (Clifford & Bostock 2007): L. spreading at right angles from a common axis. Inflorescence arms held at right angles to common axis.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 40–80 cm long. Ligule an eciliate membrane. Leaf-blades 10–20 cm long, 3–7 mm wide. Leaf-blade surface scaberulous, rough on both sides, glabrous or pilose, hairy abaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 8–25, borne along a central axis, spreading or ascending, straight or flexuous, unilateral, 15–28 cm long. Central inflorescence axis 15–35 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, lax, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 3–4.4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume lanceolate, 1.6–2.3 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 2.4–3.7 mm long, 1.6–1.7 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex obtuse or acute.

Florets. Fertile lemma elliptic or oblong, 1.4–2.3 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins close to margins. Lemma surface glabrous. Lemma margins pubescent, hairy below. Lemma apex entire or dentate, 2 -fid, obtuse. Palea 2 -veined. Palea keels scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp, oblong, isodiametric, trigonous, sulcate on hilar side, 1.2–1.3 mm long, dark brown or black.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, Western Indian ocean. Tanzania. Comoros, Madagascar.

Dinebra srilankensis N. Snow. *Novon*, 8(2): 183 (1998).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Sri Lanka. **Basionym or Replaced Name:** *Leptochloa srilankensis* N. Snow, *Novon*, 8(2): 183 (1998). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *G. Davidse & D.B. Sumithraarachi* 9066, 5 Dec 1974, Sri Lanka: Northern: Vavuniya Dist.: ca. 3 mi SW of Nedunkeni along road to Puliyanukulam, near mile post 21/3 (US-3003912).

Illustrations (Books): No illustration found (BKS).

Images: *Novon* 8: 184, fig,1; 185, Fig,2 (1983).

Derivation (Clifford & Bostock 2007): L. *-ensis*, denoting origin. From Sri Lanka.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Rootstock evident. Cataphylls evident. Culms erect or geniculately ascending, 30–60 cm long, 0.5–1 mm diam. Culm-internodes terete, solid, distally glabrous. Lateral branches lacking or sparse. Leaf-sheaths pilose, with tubercle-based hairs. Ligule a ciliate membrane, 1–4 mm long. Leaf-blades linear or lanceolate, 2–4 cm long, 2–3 mm wide. Leaf-blade surface scabrous, glabrous.

Inflorescence. Inflorescence composed of racemes. Racemes 15–20, borne along a central axis, erect or ascending, flexuous, unilateral, 1.5–5 cm long. Rhachis semiterete, glabrous on surface. Spikelet packing broadside to rhachis, lax, regular, 2 -rowed. Raceme-bases glabrous. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 1.2–1.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes curved.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 0.7–1.1 mm long, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 1.1–1.3 mm long, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent.

Florets. Fertile lemma ovate, 0.7–1 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent. Lemma lateral veins obscure. Lemma surface pubescent, hairy on veins. Lemma margins pubescent. Lemma apex acute. Palea 1 length of lemma, hyaline, 2 -veined. Palea keels puberulous, adorned above. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 0.3 mm long. Caryopsis with free soft pericarp, oblong.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Sri Lanka.

Dinebra viscida (Scribn.) Beal. *Grasses N. Amer.* ii. 434 (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 USA. **Basionym or Replaced Name:** *Diplachne viscida* Scribn., *Bull. Torrey Bot. Club* 10(1): 30 (1883)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: T: *C. G. Pringle*, USA: Arizona, Pima Co. Near Tucson (IT:NY-19501 (Possible)).

Recent Synonyms: *Leptochloa viscida* (Scribn.) Beal, *Grasses N. Amer.* 2: 434 (1896).

Illustrations (Books): J.C.Tothill,& J.B.Hacker. *The grasses of southern Queensland* (1983), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (60).

Derivation (Clifford & Bostock 2007): L. sticky. Plant sticky to touch.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Culms decumbent, 10–30 cm long. Lateral branches ample. Leaf-sheaths viscid, glabrous on surface. Ligule an eciliate membrane. Leaf-blades 1–4 mm wide, viscid.

Inflorescence. Inflorescence composed of racemes, terminal and axillary, embraced at base by subtending leaf. Racemes 15–35, borne along a central axis, closely spaced, erect or ascending, unilateral, 2–4 cm long. Central inflorescence axis 1–8 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, irregular. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 3–5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 1.5 mm long, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong or ovate, 2 mm long, membranous, viscid, keeled, 3 -veined, 0–3 -veined. Lemma midvein pubescent, hairy below. Lemma lateral veins close to margins. Lemma margins pubescent. Lemma apex acute or acuminate, awned, 1 -awned. Principal lemma awn 1 mm long overall. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA, South-central USA, Mexico. Arizona, California. New Mexico, Texas. Northeast Mexico, Northwest Mexico.

Chihuahua. Baja California, Baja California Sur, Sinaloa, Sonora.

Dinebra xerophila P.M. Peterson & E.J. Judziewicz. *Taxon*, 39(4): 659 (1990).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, W.D.Clayton & N.Snow, Key to Pacific Grasses (2010).

TYPE from Marquesas Island. **Basionym or Replaced Name:** *Leptochloa xerophila* P.M. Peterson & E.J. Judziewicz, *Taxon*, 39(4): 659 (1990). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.B.H. Brown & E.D.W. Brown 436*, 20 Jun 1921, Marquesas Island: Western Nukuhiva Island, Mauu, 0–900 m, on precipitous slopes (BISH; IT: BISH, US-2476518 (fragm.)).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): growing in exposed rocky situations as in the Marquesas.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 40–60 cm long. Ligule an eciliate membrane, 3–7 mm long. Leaf-blades filiform, convolute, 20–40 cm long, 0.5–1 mm wide. Leaf-blade surface scabrous. Leaf-blade apex filiform.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, ascending, unilateral, 2–6 cm long. Central inflorescence axis 10–20 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 1 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 oblong, laterally compressed, 3–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume ovate, 2.5 mm long, 1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 2.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma elliptic or oblong, 2.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous, eciliate. Lemma lateral veins close to margins. Lemma margins ciliate. Lemma apex emarginate, mucronate. Palea 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Caryopsis with free soft pericarp.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. South-central Pacific. Marquesas.

Dinochloa acutiflora (Munro) Soenarko. *Kew Bull.* 53:877 (1998).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Philippines. **Basionym or Replaced Name:** *Schizostachyum acutiflorum* Munro, *Trans. Linn. Soc. London* 26(1): 137 (1868)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *H. Cuming* 544, no date, Philippines: Luzon (K; ILT: L, MO-3052529, US-2876804). LT designated (as holotype) by Dransfield, *Kew Bull.* 53(4): 877 (1998).

ST: *Wilkes s.n.*, Luconia.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. acuo, sharpen; flos, flower. Paleas, lemmas or glumes with sharp apices.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped loosely. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 20–50 mm diam., woody. Culm-internodes terete, thin-walled, 40–50 cm long, smooth, distally glabrous. Lateral branches dendroid. Branch complement several. Culm-sheaths present, deciduous but leaving a persistent girdle, 10–12 cm long, 2 times as long as wide, green, smooth, pubescent, hairy at the base, with tawny hairs, truncate at apex, setose on shoulders, shoulders with curved hairs, shoulders with 8–10 mm long hairs. Culm-sheath ligule 1 mm high, entire. Culm-sheath blade ovate, narrower than sheath, erect, 10–12 cm long, 45–80 mm wide, pubescent (at base). Leaf-sheaths glabrous on surface or pubescent, hairs tawny, outer margin glabrous or hairy. Leaf-sheath oral hairs setose, deciduous. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–25 cm long, 15–25 mm wide. Leaf-blade surface glabrous or pubescent, hairy abaxially. Leaf-blade margins spinulose.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, glabrous on internodes or pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, with 1-keeled prophylls, leafless between clusters, 6–10 cm long overall.

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 lanceolate, laterally compressed, acute, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes comprising 1 gemmiferous bracts, 2 empty glumes, persistent, shorter than spikelet. Lower glume ovate, 1.5 mm long, 7 -veined. Lower glume apex acuminate. Upper glume ovate, 3–4 mm long, 9–11 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 5 mm long, 2 mm wide, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma apex acuminate. Palea 5 mm long, coriaceous, 4 -veined, 2-keeled.

Flower and Fruit. Lodicules 3, 0.5–1 mm long, ciliate. Anthers 6, anther tip apiculate. Stigmas 3. Styles 5 mm long. Ovary umbonate. Caryopsis with fleshy pericarp, oblong, 8–10 mm long, rugose. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa aguilarii Gamble. *Philipp. Journ. Sci.* 5: 280 (1910).

Regarded by K as a synonym (*D. luconiae*).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Luzon, Province of Bulacan, Angat, For. Bur., Mar 1908, *Aguilar 11163*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of S. Aguilar (fl. 1908) Philippine plant collector.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 10–20 mm diam., woody. Culm-internodes terete, thick-walled, antrorsely scabrous. Culm-nodes swollen. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane, pubescent on abaxial surface. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–13 cm long, 10–16 mm wide. Leaf-blade venation with 8–12 secondary veins. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1 mm long. Lower glume apex obtuse. Upper glume ovate, 2 mm long. Upper glume apex obtuse.

Florets. Fertile lemma orbicular, 3 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea involute, 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Anthers 6, 2 mm long, anther tip with extended connective or pubescent. Stigmas 3. Ovary umbonate. Caryopsis with fleshy pericarp, oblong, isodiametric, 4 mm long. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa alata McClure. *Journ. Arn. Arb.* 23: 100 (1942).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indochina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *W.T. Tsang 30410*, 18 July-9 Sept. 1940, Indochina: Tonkin: Sai Wong Mo Shan: Long Ngong vil. Dam-ha (L, LE, US-1815724, US-1815725).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. ala*, wing; *-ata*, possessing. Lower culm leaves with small blades.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 1100 cm long, woody. Culm-internodes terete, solid, distally glabrous. Culm-nodes swollen, glabrous (rugose). Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous, chartaceous, pilose, with appressed hairs, with tawny hairs, concave at apex or truncate at apex, without auricles, glabrous on shoulders. Culm-sheath ligule 15–22 mm high, fimbriate. Culm-sheath blade lanceolate, demarcated but persistent, reflexed, glabrous on surface. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose, spreading, 6 mm long. Leaf-sheath auricles absent or falcate. Ligule an eciliate membrane, 0.5 mm long, scaberulous on abaxial surface, erose. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long, petiole glabrous. Leaf-blades lanceolate, 10–20 cm long, 14–28 mm wide. Leaf-blade venation without cross veins or with obscure cross veins. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Indo-China. Vietnam.

Dinochloa albociliata Widjaja. *Reinwardtia* 11(2): 74 (1997).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sulawesi, Rante Tungo to Triangin: *Widjaja 3548* (BO holo).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. albus*, white; cilium, hair; -ata, possessing. Invested in part or total with white hairs.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, woody. Culm-internodes terete, thick-walled, retrorsely scabrous, distally pruinose. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous but leaving a persistent girdle (this rugose), 7 cm long, pubescent, with white hairs or tawny hairs, hairy on margins, auriculate, with 2–3 mm high auricles, setose on shoulders, shoulders with 12 mm long hairs. Culm-sheath ligule 2 mm high, entire. Culm-sheath blade narrowly ovate, constricted at base, reflexed, 9–10 cm long, 30–33 mm wide, glabrous on surface, acuminate. Leaf-sheaths puberulous, outer margin hairy. Leaf-sheath oral hairs setose, curly, 10–20 mm long. Leaf-sheath auricles erect, 2 mm long. Ligule an eciliate membrane, 1 mm long, entire or erose. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20.2–36.3 cm long, 32–37 mm wide. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 2–2.5 mm long. Lower glume apex acute, mucronate. Upper glume ovate, 2–2.5 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma oblong, 2.5–3 mm long, coriaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acute. Palea involute, 2.5–3 mm long, coriaceous, without keels. Palea apex acute.

Flower and Fruit. Lodicules absent. Anthers 6, 1 mm long, yellow. Stigmas 3. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa andamanica Kurz. *Journ. As. Soc. Beng.* 42, 2: 253 (1873).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Andaman Islands. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Andaman Is.: Coll?.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -ica*, belonging to. From Andaman Islands, India.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms prostrate or scandent, zigzag, 2000–3000 cm long, 25 mm diam., woody, rooting from lower nodes. Culm-internodes terete, thin-walled, 23–46 cm long. Culm-nodes swollen. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous, 0.25 length of internode. Culm-sheath blade triangular, as wide as sheath at base. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles falcate. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 23–30 cm long, 50–75 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 14–18 secondary veins, with distinct cross veins. Leaf-blade surface smooth. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 elliptic, laterally compressed, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate, chartaceous, without keels, 5–7 -veined. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 1.5–2 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma apex obtuse. Palea orbicular, involute, coriaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6. Stigmas 2. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Andaman Is, Nicobar Is, Thailand.

Dinochloa aopaensis Widjaja. *Reinwardtia* 12: 435 (2009).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: South East Sulawesi, Kunawe District, Pairiala Subdistrict, Rawa Aopa National Park, G.Tiga Cabang, *Elizabeth A. Widjaja EAW 8027* (Holo: BO, iso: K, L).

Illustrations (Journals): *Reinwardtia* (12 (5): 436, Fig. 1 (2009).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 20 mm diam., woody. Culm-internodes terete, 25–35 cm long, mid-green and white, distally pruinose. Lateral branches dendroid. Branch complement several. Culm-sheaths present, deciduous, 5.4–6 cm long, glabrous, glabrous on margins, auriculate, with 1–2 mm high auricles. Culm-sheath ligule 1 mm high, entire. Culm-sheath blade ovate, cordate, erect, 4–5.5 cm long, 5–9 mm wide, attenuate. Leaf-sheaths outer margin glabrous. Leaf-sheath oral hairs lacking. Leaf-sheath auricles erect, 0.5 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 18–29.7 cm long, 17–25 mm wide. Leaf-blade surface pilose, sparsely hairy, hairy abaxially. Leaf-blade margins scabrous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 25 cm long overall.

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, 2–2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 1–1.5 mm long. Lower glume apex acute, mucronate. Upper glume ovate, 1–1.5 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 2.2 mm long, coriaceous, without keel. Lemma apex acute. Palea involute, 2 mm long, coriaceous, without keels.

Flower and Fruit. Anthers 6, 1 mm long, yellow.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa barbata S. Dransfield. *Kew Bull.*, 51(1): 115 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *D. Darnaedi 1492*, 1 May 1979, Indonesia: Sulawesi: Sulawesi Tengah, Palu, -0.3 S Lat., 119.3 E Long., 1000 m (K; IT: BO, KYO, L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. bearded, barbed. With hairs on the callus, glumes or lemma.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 7 mm diam., woody. Culm-internodes terete, thick-walled or solid, 30 cm long, smooth. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, 9–10 cm long, pubescent, hairy at the base, with tawny hairs, auriculate, with 13 mm high auricles, setose on shoulders, shoulders with 17 mm long hairs. Culm-sheath ligule 22 mm high, fimbriate. Culm-sheath blade narrowly ovate, constricted at base, erect or reflexed, 11–14 cm long, 35–37 mm wide, pubescent, attenuate. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs setose. Leaf-sheath auricles erect. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 17–42 cm long, 25–53 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 100 cm long overall.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate. Lower glume apex truncate. Upper glume oblate. Upper glume apex truncate.

Florets. Fertile lemma oblong, 3 mm long, coriaceous, without keel, more than 3-veined. Lemma apex truncate. Palea involute, coriaceous, without keels.

Flower and Fruit. Lodicules 3. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, 3 mm long, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa cordata S. Dransfield. *Kew Bull.*, 51(1): 108 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sulawesi: Sulawesi Tenggara, N shore of Lake Matano, Bonemaitu, 11 Jul 1979, *de Vogel 6209a* (HT: K; IT: BO, L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. cordus*, heart; -ata, possessing.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 8–12 mm diam., woody. Culm-internodes terete, thick-walled, 15–30 cm long, smooth. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, 7–9 cm long, glabrous, auriculate, with 1 mm high auricles, setose on shoulders. Culm-sheath ligule fimbriate or ciliate. Culm-sheath blade ovate, cordate, 7.5–11 cm long, 30–50 mm wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs setose. Leaf-sheath auricles erect. Ligule an eciliate membrane, lacerate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–20 cm long, 25–40 mm wide. Leaf-blade surface scaberulous, puberulous, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in oblong clusters, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 180–300 cm long overall.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate. Lower glume apex truncate. Upper glume oblate. Upper glume apex truncate.

Florets. Fertile lemma oblong, 3 mm long, coriaceous, without keel, more than 3-veined. Lemma apex truncate. Palea involute, coriaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa darvelana S. Dransf. *Kew Bulletin* 44(3): 435, f. 1. 1989.

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

Illustrations (Journals): *Kew Bulletin* (44: 436, Fig.1 (1989)).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 10–15 mm diam., woody. Culm-internodes terete, thick-walled, 35–40 cm long. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, 10–13 cm long, purple, glabrous, hairy on margins, auriculate, with 6 mm high auricles, setose on shoulders. Culm-sheath ligule 1 mm high, entire or dentate. Culm-sheath blade ovate, erect, 10–14 cm long, 40 mm wide, glabrous on surface, acuminate. Leaf-sheaths pilose. Leaf-sheath oral hairs setose. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–23 cm long, 15–30 mm wide. Leaf-blade surface glabrous or puberulous, hairy abaxially. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, glabrous on internodes or pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 200 cm long overall.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate. Lower glume apex acute. Upper glume ovate. Upper glume apex acute.

Florets. Fertile lemma orbicular, 2 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex obtuse. Palea orbicular, involute, coriaceous, without keels.

Flower and Fruit. Anthers 6. Stigmas 3. Caryopsis with fleshy pericarp, orbicular, isodiametric, 5–9 mm long, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Dinochloa dielsiana Pilger. *Perkins, Frag. Fl. Philipp.* 1: 148 (1904).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Philippines: Island of Paragua, Ewiig River, Feb 1903, *Merrill 711* (HT:).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of Friedrich Ludwig Emil Diels (1874–1945) German botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 2000–2500 cm long, 25 mm diam., woody. Culm-internodes terete, solid. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–20 cm long, 20 mm wide. Leaf-blade venation with obscure cross veins. Leaf-blade surface smooth or scaberulous, rough adaxially. Leaf-blade margins smooth or scaberulous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in stellate clusters, dense, 2–4 cm between clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 100–200 cm long overall.

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 elliptic, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume orbicular, 2 length of upper glume, chartaceous, without keels, 9 -veined. Lower glume apex obtuse. Upper glume oblate, 3 length of adjacent fertile lemma, chartaceous, without keels. Upper glume apex cuspidate.

Florets. Fertile lemma orbicular, 4 mm long, coriaceous, without keel, more than 3-veined. Lemma apex cuspidate. Palea orbicular, involute, coriaceous, 9 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip smooth. Stigmas 3. Ovary glabrous. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa elmeri Gamble. *Philipp. Journ. Sci.* 5: 280 (1910).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Luzon, Province of Benguet, Mount Santo Tomas, Jun 1904, *Elmer 6542*.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Adolph Daniel Edward Elmer (1870–1942) United States botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, zigzag, 40–50 cm long, woody. Culm-internodes terete, thick-walled. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths puberulous. Ligule an eciliate membrane, 1–2 mm long. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades lanceolate, 5–7 cm long, 6–15 mm wide. Leaf-blade venation indistinct, with 6–8 secondary veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1 mm long. Lower glume surface puberulous. Lower glume margins ciliolate. Lower glume apex emarginate. Upper glume ovate, 1.5 mm long. Upper glume surface puberulous. Upper glume margins ciliolate. Upper glume apex emarginate.

Florets. Fertile lemma orbicular, 2.5–4 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma surface pubescent. Lemma apex emarginate, mucronate. Palea involute, coriaceous, 2-keeled (above).

Flower and Fruit. Anthers 6, 3 mm long, anther tip with extended connective. Stigmas 2–3. Ovary umbonate. Caryopsis with fleshy pericarp, oblong, isodiametric, 4 mm long. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa erecta Widjaja. *Reinwardtia* 11(2): 77 (1997).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Indonesia: Central Sulawesi, Donggala District, Gouda-gouda Village, *Widjaja 3542* (HT: BO: IT: K, L)

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. held upright. Spikelets or inflorescence branches held erect.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, woody. Culm-internodes terete, thick-walled or solid, retrorsely scabrous, distally pruinose. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous but leaving a persistent girdle (this rugose), 5.5–6 cm long, glabrous, hairy on margins, auriculate, with 2 mm high auricles, glabrous on shoulders. Culm-sheath ligule 1–1.5 mm high, entire. Culm-sheath blade narrowly ovate, constricted at base, reflexed, 4.5–5 cm long, 30–35 mm

wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs scanty, 10–16 mm long. Leaf-sheath auricles erect, 0.5–1 mm long. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 20.5–26.7 cm long, 24–40 mm wide. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 1.5–2 mm long. Lower glume apex acute, mucronate. Upper glume ovate, 1.5–2 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma oblong, 2.5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acute. Palea involute, 2.5 mm long, coriaceous, without keels. Palea apex acute.

Flower and Fruit. Anthers 6, 2 mm long, yellow. Stigmas 3. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa glabrescens Widjaja. *Reinwardtia* 11(2): 77 (1997).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Indonesia: Sumatra, Lampung, Kuta Agung, *Gusdorf 276* (HT: BO).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. glabresco*, becoming glabrous. Quite glabrous with respect to the whole plant or one or more of its parts.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, woody. Culm-internodes terete, thick-walled, purple, retrorsely scabrous, distally pruinose. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous but leaving a persistent girdle (this rugose), 11–12 cm long, glabrous, without auricles, setose on shoulders. Culm-sheath ligule 1.5 mm high, entire. Culm-sheath blade narrowly ovate, constricted at base, reflexed, 8–9.3 cm long, 17–20 mm wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent. Ligule an eciliate membrane, 0.5–0.8 mm long. Leaf-blade base symmetrical or asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15.5 cm long, 30–48 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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, 2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 1 mm long. Lower glume apex acute, mucronate. Upper glume ovate, 1 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma oblong, 1.5 mm long, coriaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acute. Palea involute, 1.5 mm long, coriaceous, without keels. Palea apex acute.

Flower and Fruit. Lodicules absent. Anthers 6, 1 mm long, yellow. Stigmas 3. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sumatra.

Dinochloa hirsuta S. Dransfield. *Kew Bull.*, 51(1): 115 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sulawesi: Malili, Wae Atue, Manurung, 10 apr 1984, *Ramlanto 136* (HT: K; IT: BO, L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. hairy. Plant hairy in respect to all or some parts.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 6 mm diam., woody. Culm-internodes terete, thin-walled, 15–20 cm long, smooth. Lateral branches dendroid. Branch complement several, with subequal branches, as thick as stem. Culm-sheaths present, 7–10 cm long, pilose, with white hairs, hairy on margins, auriculate, with 6 mm high auricles, setose on shoulders, shoulders with 22 mm long hairs. Culm-sheath ligule 10–15 mm high, ciliate. Culm-sheath blade lanceolate, erect or reflexed, 5–9 cm long, 5 mm wide, pubescent. Leaf-sheaths pubescent. Leaf-sheath oral hairs setose, 10 mm long. Leaf-sheath auricles falcate, 3 mm long. Ligule a ciliate membrane, 10 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 10–25 cm long, 25–40 mm wide. Leaf-blade surface glabrous or pilose. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa kostermansiana S. Dransfield. *Kew Bull.*, 51(1): 108 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Indonesia: Lesser Sunda Islands: Flores, Manggarai, western part near Dalur, 12 May 1965, *Kostermans 22142* (HT: K; IT: BO, L, US).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of Andre Joseph Guillaume Henri Kostermans (1907–1994) Indonesian botanist of Dutch parentage.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 15–20 mm diam., woody. Culm-internodes terete, thick-walled, 22–28 cm long, smooth, distally pubescent. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous but leaving a persistent girdle, 15 cm long, smooth, glabrous, auriculate, setose on shoulders, shoulders with 12 mm long hairs. Culm-sheath ligule lacerate. Culm-sheath blade narrowly ovate, reflexed, 9 cm long, 15 mm wide, glabrous on surface. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs setose. Leaf-sheath auricles erect. Ligule an eciliate membrane, lacerate. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 11–24 cm long, 15–40 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, glabrous on internodes or pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 60 cm long overall.

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, 2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 3–4 empty glumes, persistent, shorter than spikelet. Lower glume oblate. Lower glume apex truncate. Upper glume oblate. Upper glume apex truncate.

Florets. Fertile lemma oblong, 2 mm long, coriaceous, without keel, more than 3-veined. Lemma apex truncate. Palea involute, coriaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Lesser Sunda Is.

Dinochloa luconiae (Munro) Merrill. *Enum. Philipp. Fl. Pl.* 1: 100 (1923).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Philippines. **Basionym or Replaced Name:** *Bambusa luconiae* Munro, *Trans. Linn. Soc. London* 26(1): 115 (1868)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Wilkes Explor. Exped. s.n.*, 1838–1842, Philippines: Luzon I. (US-78068).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): from Luzon, Philippines.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 10–20 mm diam., woody. Culm-internodes terete, thick-walled, antrorsely scabrous. Culm-nodes swollen. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths glabrous on surface or puberulous. Leaf-sheath oral hairs scanty. Ligule an eciliate membrane, pubescent on abaxial surface. Leaf-blade base broadly rounded, with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–13 cm long, 10–16 mm wide. Leaf-blade venation with 8–12 secondary veins. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1 mm long. Lower glume apex obtuse. Upper glume ovate, 2 mm long. Upper glume apex obtuse.

Florets. Fertile lemma orbicular, 3 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea involute, 1 length of lemma, coriaceous, without keels.

Flower and Fruit. Anthers 6, 2 mm long, anther tip with extended connective and pubescent. Stigmas 3. Ovary umbonate. Caryopsis with fleshy pericarp, oblong, isodiametric, 4 mm long. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa macclellandii (Munro) Kurz. *Journ. As. Soc. Beng.* 42, 2: 253 (1873).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Myanmar. **Basionym or Replaced Name:** *Bambusa maclellandii* Munro, *Trans. Linn. Soc. London* 26(1): 114 (1868)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. in Ind. or. Pegu, Rangoon, Phoung Valley, *McClelland s.n.*

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of John MacClelland (1805–1885) Public Health Officer who collected in India.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 3000 cm long, 25–50 mm diam., woody. Culm-internodes terete, thin-walled, 15–20 cm long, antrorsely scabrous, distally hispid. Culm-nodes swollen. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, persistent, 15–22 cm long, 1 times as long as wide, coriaceous, pubescent, hairy throughout, with appressed hairs, with tawny hairs, truncate at apex. Culm-sheath ligule 0.5 mm high, entire or dentate. Culm-sheath blade narrowly ovate, spreading or reflexed, 15–30 cm long, 25–60 mm wide, pubescent. Leaf-sheaths keeled, striately veined, glabrous on surface or pubescent. Leaf-sheath oral hairs scanty. Leaf-sheath auricles falcate. Ligule an eciliate membrane, entire or erose. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.5 cm long. Leaf-blades oblong, 15–45 cm long, 25–100 mm wide. Leaf-blade midrib conspicuous. Leaf-blade venation with 20–36 secondary veins, with distinct cross veins. Leaf-blade apex acuminate, filiform. Flowering specimens unknown.

Flower and Fruit. $2n = 72$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, Bangladesh. Myanmar.

Dinochloa malayana S. Dransfield. *Kew Bull.*, 51(1): 110 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peninsular Malaysia: Perak, Lumut, 10 Dec 1892, *Ridley 3112* (HT: K; IT: SING).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. From Peninsula Malaysia and southern Thailand.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 7–10 mm diam., woody. Culm-internodes terete, thick-walled or solid, 10–20 cm long, antrorsely scabrous, distally hispid. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, 7–9 cm long, purple, antrorsely scabrous, hispid, without auricles. Culm-sheath ligule entire. Culm-sheath blade lanceolate, erect or reflexed, 2–5 cm long, 5 mm wide, pubescent, attenuate. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate. Leaf-sheath auricles absent. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 6–20 cm long, 15–50 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, glabrous on internodes or hispidulous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 110 cm long overall.

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, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate. Lower glume apex truncate. Upper glume oblate. Upper glume apex truncate.

Florets. Fertile lemma oblong, 2.5–3 mm long, coriaceous, without keel, more than 3-veined. Lemma apex truncate. Palea involute, coriaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Thailand. Malaya.

Dinochloa morowaliensis Widjaja. *Reinwardtia* 12: 436 (2009).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Central Sulawesi, Morowali District, Petasia Subdistrict, Bungin Timbe Village, about 2–5 km north of Kolonadale, *Elizabeth A. Widjaja EAW 7643* (Holo: BO; Iso: L, K)

Illustrations (Journals): *Reinwardtia* (12 (5): 437, Fig. 2 (2009).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 20 mm diam., woody. Culm-internodes terete, 20 cm long, mid-green and white, distally pruinose. Lateral branches dendroid. Branch complement several. Culm-sheaths present, deciduous, 7–8.5 cm long, glabrous, hairy on margins, without auricles, setose on shoulders, shoulders with 8–11 mm long hairs. Culm-sheath ligule 1 mm high, entire. Culm-sheath blade narrowly ovate, erect, 7–7.9 cm long, 8–12 mm wide, attenuate. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs setose, curly, 5–10 mm long. Leaf-sheath auricles erect, 1–2 mm long. Ligule an eciliate membrane, 1–1.5 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 24–38 cm long, 31–48 mm wide. Leaf-blade surface pubescent, hairy abaxially. Leaf-blade margins scabrous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 12–14 cm long overall.

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, 2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 1.2–1.5 mm long. Lower glume apex acute, mucronate. Upper glume ovate, 1.2–1.5 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 2 mm long, coriaceous, without keel. Lemma surface glabrous. Lemma apex acute. Palea involute, 2 mm long, coriaceous, without keels. Palea surface glabrous.

Flower and Fruit. Anthers 6, 1 mm long, yellow.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa matmat S. Dransfield & E.A. Widjaja. *Kew Bull.*, 55(2): 495 (2000).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Indonesia: East Java: Purwodadi, flowers and fruit, 7 Jul 1954, *van Krenghen & Pleyte 8a* (HT: BO; IT: L).

Illustrations (Journals): *Kew Bulletin* (55: 496, Fig.1 (2002)).

Derivation (Clifford & Bostock 2007): Besuki name of the species in Java, Indonesia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 6–20 mm diam., woody. Culm-internodes terete, thick-walled or solid, 15 cm long, distally pubescent. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, 9–10 cm long, 2.5 times as long as wide, pubescent, with appressed hairs, with white hairs, without auricles. Culm-sheath ligule 1 mm high, entire. Culm-sheath blade lanceolate, erect, 1–4(–7.5) cm long, 3–7 mm wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Leaf-sheath auricles absent. Ligule an eciliate membrane, 0.7–1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 9–19 cm long, 20–30 mm wide. Leaf-blade surface glabrous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, dense, glabrous on internodes or pubescent on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 60–75 cm long overall.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume orbicular, 2 length of upper glume, chartaceous, without keels. Lower glume apex obtuse. Upper glume oblate, 2.5 length of adjacent fertile lemma, chartaceous, without keels. Upper glume apex cuspidate.

Florets. Fertile lemma orbicular, 3 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex cuspidate. Palea orbicular, involute, 3 mm long, coriaceous, 6 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary glabrous. Caryopsis with fleshy pericarp, oblong, 6 mm long. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Java.

Dinochloa nicobariana R.B. Majumdar. *S. Karthikeyan et al., Fl. Ind. Enumerat. - Monocot.*: 277 (1989).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Nicobar Island. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Nicobar Is., Katchal Is.: Chakravarty 1129 (CAL holo).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, woody. Culm-internodes terete, 25–30 cm long, distally pubescent. Lateral branches dendroid. Branch complement many. Culm-sheaths present, deciduous, pubescent, with white hairs. Culm-sheath blade triangular, as wide as sheath at base. Leaf-sheaths pubescent. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 5–

12 cm long, 6–10 mm wide. Leaf-blade venation with 8–10 secondary veins. Leaf-blade surface smooth. Leaf-blade apex attenuate, filiform.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 elliptic, laterally compressed, 2–4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume orbicular, 2.5–3.5 mm long, chartaceous, without keels. Lower glume apex obtuse. Upper glume orbicular, 2.5–3.5 mm long, chartaceous, without keels. Upper glume apex obtuse.

Florets. Fertile lemma oblong, 2.5 mm long, coriaceous, without keel, more than 3-veined. Lemma apex obtuse. Palea orbicular, involute, 2.5 mm long, coriaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6. Stigmas 3. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China. Nicobar Is.

Dinochloa obclavata S. Dransfield. *Kew Bull.*, 36(3): 620 (1981).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J. Dransfield SD 784*, 25 Oct 1979, Malaysia: Sabah: Borneo Telupid, 50 m (L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. *ob-*, inversely; *clavis*, club; *-ata*, possessing. Club-shaped but with the swollen end towards the base.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 7 mm diam., woody. Culm-internodes terete, thin-walled, 20–30 cm long, smooth, distally glabrous. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, 15–21 cm long, purple, smooth, glabrous, without auricles. Culm-sheath ligule 1 mm high, ciliate. Culm-sheath blade lanceolate, erect, 5–9 cm long, 5–10 mm wide, glabrous on surface, attenuate. Leaf-sheaths hispid, outer margin hairy. Leaf-sheath oral hairs setose. Leaf-sheath auricles erect, 1 mm long. Ligule a ciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 13–20 cm long, 12–19 mm wide. Leaf-blade surface scabrous, pubescent. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 150 cm long overall.

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, 2–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate, 1.5 mm long, 3 -veined. Lower glume apex truncate. Upper glume oblate, 2 mm long, 7 -veined. Upper glume apex cuspidate.

Florets. Fertile lemma oblong, 2.5 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea involute, 3.5 mm long, coriaceous, 6–8 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, ovoid, isodiametric, 15 mm long, pallid or green, smooth, glabrous, acute. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Dinochloa oblonga S. Dransfield. *Kew Bull.*, 51(1): 113 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sabah. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Palawan: Puerto Princesa, km 36 to Roxas, 11 May 1984, *J. Dransfield et al. 6185* (HT: K) ; Sabah, Telupid: Dransfield SD 784 (K holo, BO, K, KEP, SAN, SAR).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. oblongus*, oblong.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 10–19 mm diam., woody. Culm-internodes terete, solid, 17 cm long, smooth, distally pruinose or glabrous. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, 16–18 cm long, smooth, glabrous, auriculate, with 8–12 mm high auricles, with 2–3 mm wide auricles, setose on shoulders, shoulders with 10–12 mm long hairs. Culm-sheath ligule 1 mm high, entire or ciliate. Culm-sheath blade narrowly ovate, cordate, erect or reflexed, 10–15 cm long, 10–18 mm wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface or pubescent. Leaf-sheath oral hairs ciliate, 5–7 mm long. Leaf-sheath auricles erect, 2 mm long. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 18–26 cm long, 25–55 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in oblong clusters, glabrous on internodes, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 30 cm long overall.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 2–3 empty glumes, persistent, shorter than spikelet. Lower glume oblate. Lower glume apex truncate. Upper glume oblate. Upper glume apex truncate.

Florets. Fertile lemma oblong, 2 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute. Palea involute, 2 mm long, coriaceous, 6 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, oblong, isodiametric, 12 mm long, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa orenuda McClure. *Lingnan Univ. Sci. Bull.*, No. 9, 18 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *H.Fung 20230*, 3 May 1932–20 May 1932, China: Hainan, Ling Shui Dist. (LU(US-2802829)). OS.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. os*, mouth; *nuda*, base. Orifice of leaf-sheath lacking auricles.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 900 cm long, 35 mm diam., woody. Culm-internodes terete. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, coriaceous, hispid, with appressed hairs, with white hairs, glabrous on shoulders. Culm-sheath ligule entire. Culm-sheath blade lanceolate, reflexed, glabrous on surface. Leaf-sheaths striately veined, glabrous on surface, outer margin glabrous. Leaf-sheath oral hairs scanty. Leaf-sheath auricles absent. Ligule an eciliate membrane, obtuse. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

Dinochloa palawanensis (Gamble) S. Dransfield. *Kew Bull.*, 51(1): 106 (1996).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. **Basionym or Replaced Name:** *Schizostachyum palawanense* Gamble, *Philipp. J. Sci.* 5(4): 274 (1910)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Indonesia, Palawan, Puerto Princesa: Bur. Sci. 277.

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ense, denoting origin. From Palawan, Philippines.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 100–200 cm long, 8 mm diam., woody. Culm-internodes terete, solid, 10–20 cm long. Culm-nodes swollen. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths striately veined. Leaf-sheath oral hairs scanty. Ligule a ciliate membrane, 2 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades lanceolate, 8–15 cm long, 7–15 mm wide. Leaf-blade venation indistinct, with 8–12 secondary veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafy between clusters.

Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 1 fertile florets, with a barren rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, acute, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 2–3 empty glumes, persistent, shorter than spikelet. Lower glume ovate, chartaceous, without keels. Lower glume apex acute. Upper glume ovate, 4 mm long, chartaceous, without keels. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 5 mm long, chartaceous, without keel, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex acute. Palea tightly convolute around flower, 1 length of lemma, chartaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 4 mm long, anther tip penicillate. Stigmas 3. Ovary with a steeple-like appendage, glabrous. Caryopsis with free brittle pericarp.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa petasiensis Widjaja. *Reinwardtia* 12: 438 (2009).

TYPE from Indonesia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Central Sulawesi, Morowali District, PatasiaSubdistrict, Bungin Timbe Village, about 2–5 km north of Kolondale, *Elizabeth A. Widjaja* EAW 7641 (Holo: BO; Iso: L, K).

Illustrations (Journals): *Reinwardtia* (12 (5): 438, Fig. 3 (2009).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 20 mm diam., woody. Culm-internodes terete, 20–30 cm long, mid-green and white, distally pruinose. Lateral branches dendroid. Branch complement several. Culm-sheaths present, deciduous, 7–8.5 cm long, pilose, with white hairs or tawny hairs, hairy on margins, auriculate, with 1 mm high auricles, glabrous on shoulders or ciliate on shoulders (1–2 bristles), shoulders with 4 mm long hairs. Culm-sheath ligule 1 mm high, entire or dentate. Culm-sheath blade narrowly ovate, cordate, erect, 4–7.5 cm long, 5–12 mm wide, attenuate. Leaf-sheaths pilose, hairs tawny. Leaf-sheath oral hairs setose, curly, 10–17 mm long. Leaf-sheath auricles erect. Ligule an eciliate membrane, 1–2 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 23–39 cm long, 32–53 mm wide. Leaf-blade surface glabrous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 30 cm long overall.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume ovate, 1–1.5 mm long. Lower glume apex acute, mucronate. Upper glume ovate, 1–1.5 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma ovate, 2 mm long, coriaceous, without keel. Lemma surface glabrous. Lemma apex acute. Palea involute, 2 mm long, coriaceous, without keels. Palea surface glabrous or puberulous. Palea apex acute.

Flower and Fruit. Anthers 6, 1.5 mm long, yellow.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Sulawesi.

Dinochloa prunifera S. Dransfield. *Kew Bull.*, 36(3): 622 (1981).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Dransfield 776*, 23 Oct 1979, Malaysia: Sabah Borneo: Telupid, 50 m (K; IT: KEP, L, SAR, SING).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. prunum*, plum; *fero*, carry or bear. Fruit about the size of a plum.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 10 mm diam., woody. Culm-internodes terete, thick-walled, 25 cm long, smooth. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, 15 cm long, green, glabrous, hairy on margins, auriculate, with 1–1.5 mm high auricles, setose on shoulders, shoulders with 6–12 mm long hairs. Culm-sheath ligule 0.5–1 mm high. Culm-sheath blade ovate, cordate, erect or reflexed, 13 cm long, 25 mm wide, scabrid. Leaf-sheath oral hairs ciliate, 6–8 mm long. Leaf-sheath auricles falcate, 1 mm long. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 17–25 cm long, 32 mm wide. Leaf-blade surface scabrous, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 300 cm long overall.

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 ovate, laterally compressed, 7(–9) mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 3 empty glumes, persistent, shorter than spikelet. Lower glume oblate, 2 mm long, 7 -veined. Lower glume margins ciliolate. Lower glume apex cuspidate. Upper glume oblate, 4 mm long, 13 -veined. Upper glume margins ciliolate. Upper glume apex cuspidate.

Florets. Fertile lemma ovate, 8 mm long, coriaceous, without keel, 15–19 -veined, more than 3-veined. Lemma apex acute. Palea present or absent or minute, involute, hyaline, 6 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Filaments free or united in groups. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, 17–30 mm long, green, rugose, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Dinochloa pubiramea Gamble. *Philipp. Journ. Sci.* 5: 279 (1910).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Philippines. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *F.H. Bolster 319*, Apr 1906, Philippines: Mindanao I. (US-2875369).

ST: *Hutchinson 3977*, Feb 1906, Philippines: Basilan, near Isabela, For. Bur.

ST: Jul 1906, Negros, Sicara River, Everett.

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 29 mm diam., woody. Culm-internodes terete, thick-walled, scaberulous. Culm-nodes swollen. Lateral branches dendroid. Culm-sheaths present. Leaf-sheaths keeled. Leaf-sheath oral hairs lacking. Ligule a ciliolate membrane. Leaf-blade base asymmetrical, with a brief petiole-like connection to sheath, petiole 0.2–0.4 cm long. Leaf-blades lanceolate, 17–27 cm long, 20–50 mm wide. Leaf-blade venation

with 26–28 secondary veins. Leaf-blade surface glabrous or puberulous, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 elliptic, laterally compressed, 3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, dissimilar, shorter than spikelet. Lower glume ovate, 1.5 mm long. Lower glume apex emarginate. Upper glume ovate, 2.5 mm long. Upper glume apex emarginate.

Florets. Fertile lemma orbicular, 3 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex acute. Palea involute, 2–3 mm long, coriaceous, without keels.

Flower and Fruit. Lodicules 3, 1 mm long, ciliate. Anthers 6, 1.5 mm long, anther tip with extended connective or pubescent. Stigmas 3. Ovary umbonate. Caryopsis with fleshy pericarp, orbicular, isodiametric. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Philippines.

Dinochloa robusta S. Dransfield. *Kew Bull.*, 47(3): 402 (1992).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sabah. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Borneo: Sabah: Pulau Banggi, 19 Feb 1934, *D. Balajadia* 3757 (HT: K; IT: SAN).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. robust.* Culms tall, or leaf-blades or spikelets large.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, woody. Culm-internodes terete, thick-walled, 30 cm long, distally hispid. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, hispid, hairy at the base, with tawny hairs, without auricles. Culm-sheath ligule 0.5–1 mm high, entire. Culm-sheath blade ovate, cordate, reflexed, 11–18 cm long, 30–55 mm wide, pubescent, acuminate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 9.5–17 cm long, 15–25 mm wide. Leaf-blade surface glabrous.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 200 cm long overall.

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 elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes several, 2–3 empty glumes, persistent, dissimilar, shorter than spikelet.

Florets. Fertile lemma orbicular, 2–2.5 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea orbicular, involute, coriaceous, 8 -veined, without keels. Palea apex obtuse.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Dinochloa scabrida S. Dransfield. *Kew Bull.*, 36(3): 628 (1981).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sabah. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sabah: Nabawan: Pensiangan, 11 Sep 1979, *Dransfield* SD 746 (HT: K; IT: L, SAN, SAR).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. rough.* Plants in part or totally rough to the touch.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 20 mm diam., woody. Culm-internodes terete, solid, 20–25 cm long, smooth. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, purple, smooth, glabrous. Culm-sheath ligule 2 mm high, entire. Culm-sheath blade triangular, cordate, erect, 8.5–10.5 cm long, 25 mm wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 12–25 cm long, 15–25 mm wide. Leaf-blade surface scabrous, glabrous. Leaf-blade margins pubescent. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in oblong clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 300 cm long overall.

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, 2.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate, 1.5 mm long, 5 -veined. Lower glume apex truncate. Upper glume oblate, 2 mm long, 7 -veined. Upper glume apex truncate.

Florets. Fertile lemma orbicular, 2.3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate. Palea involute, 3 mm long, coriaceous, 8 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, 5 mm long, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Dinochloa scandens (Blume ex Nees) Kuntze. *Rev. Gen.* 773 (1891).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online, W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. **Basionym or Replaced Name:** *Bambusa scandens* Blume, *Flora* 7: 291 (1824)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Java: Megamendung, *Blume s.n.* (HT: L).

Illustrations (Books): D.Farrelly, *The Book of Bamboo* (1984).

Images: H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971);

Derivation (Clifford & Bostock 2007): L. scando, climb up. Of scrambling habit.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 15–25 mm diam., woody. Culm-internodes terete, thick-walled, distally pubescent. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous but leaving a persistent girdle (girdle rugose), auriculate. Culm-sheath blade lanceolate, 8 cm long. Leaf-sheaths pubescent. Leaf-sheath oral hairs scanty. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 15–25 cm long, 25–35 mm wide. Leaf-blade venation with distinct cross veins.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, 0.3 cm long, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 elliptic, laterally compressed, 2 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet. Lower glume orbicular, 0.5 length of upper glume, chartaceous, without keels, 3 -veined. Lower glume apex obtuse. Upper glume oblate, 0.75 length of adjacent fertile lemma, chartaceous, without keels, 9 -veined. Upper glume apex cuspidate.

Florets. Fertile lemma oblate, 1.8 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma apex cuspidate. Palea orbicular, involute, 1.2 length of lemma, coriaceous, 8 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 4 mm long. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, 5 mm long. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indo-China, Malesia. Andaman Is, Nicobar Is, Thailand. Borneo, Java, Malaya, Philippines.

Dinochloa sepang Widjaja & Astuti. *Reinwardtia* 12: 200 (2004).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online.

TYPE from Indonesia. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Bali, Buleleng, Sepang, *E.A. Widjaja 7561* (BO- holotype, K, L - Isotype).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): From Sepang, Bali, Indonesia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 6–30 mm diam., woody. Culm-internodes terete, thick-walled, 15.3–23 cm long, distally pubescent. Lateral branches dendroid. Branch complement many. Culm-sheaths present, hispid, hairy at the base, with dark brown hairs, convex at apex, auriculate, with 3 mm high auricles. Culm-sheath ligule 4 mm high. Culm-sheath blade lanceolate, reflexed, 5.4–10.3 cm long. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1–2 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.4 cm long. Leaf-blades lanceolate, 15–27 cm long, 17–55 mm wide.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, dense, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between clusters.

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 elliptic, laterally compressed, 3–4 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume orbicular, chartaceous, without keels. Upper glume ovate, 1.1–1.5 mm long, 0.4–0.5 length of adjacent fertile lemma, chartaceous, without keels. Upper glume apex cuspidate.

Florets. Fertile lemma oblate, 3 mm long, coriaceous, without keel, more than 3-veined. Lemma apex cuspidate. Palea orbicular, involute, 4 mm long, coriaceous, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, 1–2 mm long, red. Stigmas 3. Ovary umbonate. Caryopsis with fleshy pericarp, obovoid, 4–5 mm long.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Lesser Sunda Is.

Dinochloa sipitangensis S. Dransfield. *Kew Bull.*, 36(3): 620 (1981).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sabah. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Sabah: Sipitang, Ulu Sipitang, 26 July 1964, *Rundi SAN-43276* (HT: K; IT: SAN).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. -ensis*, denoting origin. From Sipitang, Sabah, Malaysia.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 9 mm diam., woody. Culm-internodes terete, solid, 25 cm long, smooth. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, smooth, glabrous, hairy on margins. Leaf-sheaths pubescent, outer margin hairy. Ligule an eciliate membrane, 1 mm long, lacerate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 14–15.5 cm long, 13–18 mm wide. Leaf-blade surface pubescent, hairy on both sides. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in untidy tufts, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 150 cm long overall.

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 elliptic, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblong, 1 mm long, 3 -veined. Lower glume apex truncate. Upper glume oblong, 1.5 mm long, 5 -veined. Upper glume apex truncate.

Florets. Fertile lemma oblong, 2 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma apex truncate. Palea involute, 2.5 mm long, coriaceous, 4–6 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, 7–8 mm long, smooth or rugose (slightly), glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

***Dinochloa sublaevigata* S. Dransfield. *Kew Bull.*, 36(3): 626 (1981).**

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J. Dransfield 720*, 30 Aug 1979, Malaysia: Sabah: Borneo: Ranau: Poring, 600 m (K; IT: L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. sub-*, approaching; *laevigata*, smooth and polished. Culms with stiff hairs when young but becoming smooth and glabrous with age.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 20 mm diam., woody. Culm-internodes terete, solid, 30–35 cm long, smooth, distally hispid. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, 8–15 cm long, glabrous or pubescent, hairy on margins, auriculate, with 3 mm high auricles, glabrous on shoulders. Culm-sheath ligule 1–2 mm high, entire. Culm-sheath blade ovate, reflexed, 8.5 cm long, 20–25 mm wide, glabrous on surface, attenuate. Leaf-sheaths glabrous on surface, outer margin hairy. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 30–40 cm long, 45–65 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface smooth, glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 200–300 cm long overall.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate, 1.5 mm long, 5 -veined. Lower glume apex truncate. Upper glume oblate, 2 mm long, 7 -veined. Upper glume apex truncate.

Florets. Fertile lemma orbicular, 3 mm long, coriaceous, without keel, 7 -veined, more than 3-veined. Lemma apex obtuse. Palea involute, 3.5 mm long, coriaceous, 8 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, 9 mm long, rugose, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

***Dinochloa trichogona* S. Dransfield. *Kew Bull.*, 36(3): 624 (1981).**

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Malaysia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *J. Dransfield SD 747*, 14 Sept 1979, Malaysia: Sabah: Borneo: Nabawan, 50 m (L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): Gk *thrix*, hair; *gonia*, angle. Upper surface of leaf-blade hairy towards its base.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms zigzag, 20–30 mm diam., woody. Culm-internodes terete, solid, 20–25 cm long, antorsely scabrous, distally glabrous or pubescent. Lateral branches dendroid. Branch complement many, with 1 branch dominant, as thick as stem. Culm-sheaths present, brown or purple, pubescent, hairy at the base, with

erect hairs, with dark brown hairs, hairy on margins, auriculate, with 5–15 mm high auricles, setose on shoulders, shoulders with curved hairs. Culm-sheath ligule 15 mm high, lacerate. Culm-sheath blade narrowly ovate, cordate, erect or reflexed, 11.5 cm long, 25 mm wide, pubescent, attenuate. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs setose, curly, 10 mm long. Leaf-sheath auricles falcate, 5 mm long. Ligule an eciliate membrane, 10 mm long, lacerate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 25–30 cm long, 70 mm wide. Leaf-blade venation with distinct cross veins. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in globose clusters, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches, 200–300 cm long overall.

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, 2–3 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes two, persistent, shorter than spikelet. Lower glume oblate, 1 mm long, 3 -veined. Lower glume apex truncate. Upper glume oblate, 1.5 mm long, 1–5 -veined. Upper glume apex truncate.

Florets. Fertile lemma oblong, 2 mm long, coriaceous, without keel, 1–7 -veined, 0–3 -veined or more than 3-veined. Lemma apex truncate. Palea involute, 2 mm long, coriaceous, 6 -veined, without keels.

Flower and Fruit. Lodicules absent. Anthers 6, anther tip apiculate. Stigmas 3. Ovary umbonate, glabrous. Caryopsis with fleshy pericarp, orbicular, isodiametric, 10 mm long, green or black, smooth, glabrous. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Malesia. Borneo.

Dinochloa truncata Widjaja. *Reinwardtia* 11(2): 78 (1997).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Indonesia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Sulawesi, Gorontalo: *Widjaja 4871* (BO holo, K, L).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. trunco*, shorten by cutting off. Truncate with respect to apices of lemmas or glumes.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, zigzag, 20 mm diam., woody. Culm-internodes terete, thick-walled or solid, 15–20 cm long, purple, retrorsely scabrous, distally pruinose. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous but leaving a persistent girdle (this rugose), 8.5–10 cm long, pubescent, with appressed hairs, with tawny hairs, truncate at apex, without auricles, setose on shoulders. Culm-sheath ligule 1.5 mm high, entire. Culm-sheath blade narrowly ovate, constricted at base, reflexed, 6–7 cm long, 15–20 mm wide, glabrous on surface, acuminate. Leaf-sheaths glabrous on surface. Leaf-sheath auricles absent. Ligule an eciliate membrane, 1 mm long. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades lanceolate, 12–20 cm long, 15–33 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate.

Inflorescence. Synflorescence bractiferous, clustered at the nodes, in compact unilateral clumps, with glumaceous subtending bracts, with axillary buds at base of spikelet, prophyllate below lateral spikelets, leafless between branches.

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 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes one the lower absent or obscure, persistent, shorter than spikelet. Upper glume ovate, 1.5 mm long. Upper glume apex acute, mucronate.

Florets. Fertile lemma oblong, 1.5–2 mm long, coriaceous, without keel, more than 3-veined. Lemma surface glabrous. Lemma apex acute, mucronate. Palea involute, 1.5–2 mm long, coriaceous, without keels. Palea apex acute.

Flower and Fruit. Lodicules 3, 0.5 mm long, membranous, ciliate. Anthers 6, 1.5 mm long, yellow. Stigmas 3. Caryopsis with fleshy pericarp. Endosperm evanescent.

Distribution (TDWG). Continent. Tropical Asia.
Country /Province /State. Malesia. Sulawesi.

Dinochloa utilis McClure. *Lingnan Univ. Sci. Bull.*, No. 9, 20 (1940).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *F.A. McClure 20136*, May 1932, China: Kwangtung: Hainan I. (US-2802831).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. useful. Culms used for paper making.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms scandent, 3000 cm long, 40 mm diam., woody. Culm-internodes terete, thin-walled, distally pubescent. Culm-nodes swollen. Lateral branches dendroid. Branch complement several, with 1 branch dominant, as thick as stem. Culm-sheaths present, deciduous, coriaceous, hispid, with appressed hairs, with white hairs. Culm-sheath blade lanceolate. Leaf-sheaths ribbed, glabrous on surface, outer margin glabrous. Leaf-sheath oral hairs scanty. Leaf-sheath auricles absent. Ligule an eciliate membrane, truncate. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades oblong, 11–20 cm long, 24–40 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. Hainan.

Diplachne fusca susp. fasciculata (Lam.) P.M.Peterson & N.Snow. *Man. Bot. N. U. St. ed. V.* 623 (1890).

Regarded by K as a synonym (*L. fusca*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from South America. **Basionym or Replaced Name:** *Festuca fascicularis* Lam., *Tabl. Encyc.* 1 : 189 (1791). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: South America: Richard (P hol).

Recent Synonyms: *Leptochloa polystachya* (Michx.) Kunth, *Rev. Gram.* 1: 91 (1829). *Leptochloa fascicularis* (Lam.) A. Gray, *Man. Bot. N. U. St. ed. V.* 623 (1890).

Illustrations (Books): F.W.Gould, *The Grasses of Texas* (1975) (230, Fig. 119), R.McVaugh, *Flora Nova-Galiciana Vol.14 Gramineae* (1983), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (104, Fig. 61), S.A.Renouze, *The Grasses of Bahia*, 1984 (81, Fig. 29), E.Hafliger & E.Schultz, *Grass Weeds*, CIBA-GEIGY (2:61(1980) as *Diplachne*).

Illustrations (Journals): *Darwiniana* (33: 239, Fig.1 (1992) as *Diplachne*).

Derivation (Clifford & Bostock 2007): L. fascis, bundle; -ula, diminutive; -aris, pertaining to. Spikelets or racemes clustered in the inflorescence.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual, caespitose. Basal innovations flabellate. Culms erect or geniculately ascending or decumbent, 50–100 cm long. Lateral branches ample. Leaf-sheaths glabrous on surface. Leaf-sheath auricles erect. Ligule an eciliate membrane, 2–6 mm long, lacerate. Leaf-blades flat or involute, 2–7 mm wide. Leaf-blade surface glabrous or hispid, sparsely hairy.

Inflorescence. Inflorescence composed of racemes, terminal and axillary. Racemes 6–35, borne along a central axis, erect or ascending, unilateral, 4–12 cm long. Central inflorescence axis 6–25 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2-rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 6–12 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–10 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 2.5 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1-veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 3–4.2 mm long, 0.75–1 length of adjacent fertile lemma, membranous, 1-keeled, 1-veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex entire or dentate, 2-fid, acute, mucicous or mucronate.

Florets. Fertile lemma oblong or ovate, 3–5 mm long, membranous, grey, keeled, 3-veined, 0–3-veined. Lemma midvein pubescent, hairy below. Lemma lateral veins close to margins, excurrent or extending close to apex. Lemma margins pubescent, hairy below. Lemma apex acute or acuminate, awned, 1-awned. Principal

lemma awn 0.5–1.5 mm long overall. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Europe (*), Tropical Asia, North America, South America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Malesia, Papuaia.** Java. **Eastern Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, Southeastern USA, 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, Honduras, Nicaragua. Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Puerto Rico. Bolivia, Peru. Brazil Northeast. Argentina Northeast, Paraguay, Uruguay.

TDWG4. Buenos Aires. Distrito Federal, Mexico State, Morelos. Aguascalientes, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Baja California, Sonora. Jalisco, Michoacan. Yucatan.

Diplachne fusca (L.) P.Beauv. ex Roem. & Schult. *Ann. Bot.* 109: 1327 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of 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 *Diplachne*), T.Koyama, *Grasses of Japan and its neighboring regions* (1987) (as *Diplachne*).

TYPE from "Palestine". **Basionym or Replaced Name:** *Festuca fusca* L., *Syst. Nat. (ed. 10):* 2: 876 (1759). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *F. Hasselquist s.n.*, Palestine (LINN-92.21). LT designated by Phillips, *Fl. Trop. E. Afr., Gram* (2): 281 (1974).

Recent Synonyms: *Leptochloa malabarica* (L.) Veldkamp, *Blumea* 19(1): 64 (1971). *Leptochloa fusca* (L.) Kunth, *Rev. Gram.* 1: 91 (1829).

Diplachne cuspidata Launert, *Prodr. Fl. Sudwestafr* 160: 68 (1970).

Diplachne festuciformis H. Scholz, *Willdenowia* 11(1): 98 (1981).

Ottochloa malabarica (L.) Dandy, *J. Bot.* 69:55 (1931).

Diplachne parviflora (R.Br.) Benth., *Fl. Austral.* 7: 620. (1878).

Illustrations (Books): H.Jacques-Felix, *Les Graminees d'Afrique tropicale* (1962) (as *Diplachne*), R.M.Pollhill, F.T.E.A., *Gramineae* (2(1974):283, Fig. 77 as *Diplachne*), L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (120, Fig. 90 as *Diplachne*), G.E.Gibbs Russell et al, *Grasses of Southern Africa* (1990) (117, Fig 70 as *Diplachne*), J.Bosser, *Graminees des Paturage et des Cultures a Madagascar* (1969) (179, Fig. 62 as *Diplachne*), L.Boulos, *Flora of Egypt* 4 (2005) (246, Pl. 72), N.Feinbrun-Dothan, *Flora Palaestina* 4 (1986) (Pl. 385 as *Diplachne*), N.L.Bor, *Gramineae in Flora of Iraq* (1968) (435, Pl. 164 as *Diplachne*), T.Koyama, *Grasses of Japan and its neighbouring regions* (1987) (264, Fig 99 as *Diplachne*), C-C Hsu, *Flora of Taiwan*, Vol 5 (1978) (386 as *Diplachne*), C-C Hsu, *Taiwan Grasses* (1975) (474, Pl. 1400 as *Diplachne*), K.M.Matthew, *Illustrations on the Flora of Tamilnadu Carnatic* (1982) (Pl. 851 & 852 as *Diplachne*), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982) (73, Fig. 9 as *Diplachne*), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (387, Fig. 321, 388, Fig. 322 & 389, Fig. 323 as subspecies *fusca* & *uninervia* & *muelleri*), C.A.Gardner, *Flora of Western Australia*, Vol 1, Part 1, *Gramineae* (1952) (112, Pl 32 as *Diplachne muelleri*), J.R.Wheeler et al, *Flora of the Kimberley Region* (1992) (1134, Fig. 327 as *Diplachne parviflora*), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (as *Diplachne*), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (222 as *Diplachne fusca* & 223 as *Diplachne parviflora*, *D.muelleri* & *D. uninervia*), J.C.Tothill, & J.B.Hacker. *The grasses of southern Queensland* (1983) (202 as *Diplachne parviflora*), T.D.Stanley & E.Ross, *Flora of South East Queensland, Gramineae* (1989) (as *Diplachne*), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (442, Fig 79), 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) (as subsp. *brachiata*, *fasicularis*, *fusca*, *mucronata*, *uninervia*), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (374, Fig. 130 as *Diplachne uninervia*), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (237, Fig. 90 as *Diplachne uninervia* var. *procumbens*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (432, Fig. 112 as *Diplachne uninervia* var. *procumbens*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (238, Fig. 238 as *Diplachne uninervia* & as *D. uninervia* var. *uninervia*), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 17, Fig. 3 (2001) as ssp. *uninervia*), S-L Chen et al, *Flora of China*, *Illustrations, Poaceae* (2007) (Fig. 659).

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*; (as subsp. *muelleri*),

L.Boulos, *Flora of Egypt* 4 (2005);, H.B.Gilliland et al., *Flora of Malaya Vol. 3 Grasses* (1971); (as *Diplachne*), F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999) (as *Diplachne*).

Derivation (Clifford & Bostock 2007): L., dark, swarthy. Glumes or lemmas dark-brown.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms decumbent, 60–150 cm long, rooting from lower nodes. Ligule an eciliate membrane, 3–8 mm long, acute. Leaf-blades flat or convolute, 25–55 cm long, 3–5 mm wide, stiff, mid-green or grey-green. Leaf-blade midrib widened. Leaf-blade surface scabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence composed of racemes. Racemes 10–30, borne along a central axis, erect, straight, unilateral, 7–15 cm long. Central inflorescence axis 15–30 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, lax. Spikelets solitary. Fertile spikelets pedicelled or sessile. Pedicels absent or present, filiform, 0.5–1.5 mm long.

Fertile Spikelets. Spikelets comprising 6–11 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, compressed slightly, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas. Floret callus evident, pubescent, obtuse, disarticulating obliquely.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 2.1–4.6 mm long, 0.6–0.7 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute or acuminate. Upper glume oblong, 3.3–7.4 mm long, 1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex obtuse or acute, mucronate.

Florets. Fertile lemma oblong, 3.2–5.9 mm long, membranous, dark green or grey, without keel, 3 -veined, 0–3 -veined. Lemma midvein ciliate, hairy below. Lemma lateral veins close to margins. Lemma margins pilose, hairy below. Lemma apex dentate, 2 -fid, mucronate or awned, 1 -awned. Principal lemma awn from a sinus, 0.3–1.6 mm long overall. Palea 2 -veined. Palea keels scabrous. Palea surface pubescent, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 1.3–2.7 mm long. Caryopsis with adherent pericarp, ellipsoid, flattened, concavo-convex, 1.6–1.8 mm long.

Distribution (TDWG). Continent. Europe (*), Africa, Temperate Asia, Tropical Asia, Australasia, North America, South America.

Region. Northern Europe (*).

Country /Province /State. : Great Britain (*). **Northern Africa, West tropical Africa, West-central tropical Africa, Northeast tropical Africa, East tropical Africa, South tropical Africa, Southern Africa, Western Indian ocean.** Algeria, Egypt, Morocco. Nigeria, Senegal. Congo, DRC. 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, Western Cape, Eastern Cape. Madagascar. **Western Asia, Arabian Peninsula, China, Eastern Asia.** Iraq. Gulf States, Kuwait. China South Central, Manchuria, China North-Central, China Southeast. Japan, Taiwan. Japan Honshu, or Kyushu. **Indian Subcontinent, Indo-China, Malesia, Papuasias.** Bangladesh, India, Pakistan, Sri Lanka. Cambodia, Myanmar, Thailand, Vietnam. Java, Malaya, Philippines, Sumatra. New Guinea West Papua (Irian Jaya). New Guinea. **Australia.** Western Australia, Northern Territory, South Australia, Queensland, New South Wales, Victoria. New Caledonia. Hawaii (*). **Western Canada, Northwest USA, North-central USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** British Columbia. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Illinois, Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, Oklahoma, South Dakota, Wisconsin. Maine, New Jersey, New York, Pennsylvania. Arizona, California, Nevada. 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, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Western South America, Brazil, Southern South America.** Colombia. Brazil West Central, Brazil Northeast, Brazil Southeast, Brazil South. Argentina Northeast, Argentina Northwest, Chile North.

TDWG4. Hebei, Shandong. Anhui, Fujian, Guangdong, Henan, Jiangsu, Zhejiang. Hubei, Yunnan. 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. 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. Neuquén, Río Negro. Tarapaca, Antofagasta, Atacama. Distrito Federal, Mexico State, Morelos, Puebla. Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Baja California Sur, Sinaloa, Sonora. Guerrero, Jalisco, Nayarit, Oaxaca. Chiapas.

Diplachne fusca subsp. uninervia (J.Presl) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1327 (2012).

Regarded by K as a synonym (*L. fusca*).

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. **Basionym or Replaced Name:** *Megastachya uninervia* J. Presl, *Reliq. Haenk.* 1(4–5): 283 (1830)

T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Haenke 101*, Mexico (PR; ILT: LE-TRIN-2424.01, US-78697 (fragm.), W). LT designated by Snow, *Novon* 8: 79 (1998).

Recent Synonyms: *Leptochloa uninervia* (Presl) Hitchcock & Chase, *Contrib. US. Nat. Herb.* xviii. 383 (1917).

Illustrations (Books): J.R.Wheeler et al, *Flora of the Kimberley Region* (1992), W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1559, Pl. 231), F.W.Gould, *The Grasses of Texas* (1975) (230, Fig. 120), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (105, Fig. 62), S.A.Renvoize, *Gramineas de Bolivia* (1998) (298, Fig 61), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (as *Diplachne uninervia* var. *procumbens*), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (504, Fig. 341 as *Diplachne uninervia*), E.Hafliger & E.Schultz, *Grass Weeds, CIBA-GEIGY* (2:98(1980)).

Derivation (Clifford & Bostock 2007): *L. unus*, one; *nervus*, nerve. Glumes one-nerved.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Annual. Culms erect or geniculately ascending, 75–130 cm long. Leaf-sheaths loose. Leaf-sheath auricles erect. Ligule an eciliate membrane, 1.5–2 mm long, truncate. Leaf-blades flat or involute, 6–45 cm long, 3–6 mm wide. Leaf-blade surface scaberulous.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, borne along a central axis, ascending, unilateral, 2–5 cm long. Central inflorescence axis 10–35 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 5–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, subterete or laterally compressed, compressed slightly, 3–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, shorter than spikelet. Lower glume oblong or ovate, 0.8–1.4 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex truncate or acute. Upper glume oblong or ovate, 1.6–2 mm long, 0.8 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scabrous. Upper glume lateral veins absent. Upper glume apex truncate or acute.

Florets. Fertile lemma oblong, 2–2.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma midvein eciliate. Lemma lateral veins close to margins. Lemma margins pubescent, hairy below. Lemma apex emarginate, muticous or mucronate or awned, 1 -awned. Principal lemma awn 0–0.5 mm long overall. Palea 2 -veined. Palea surface pubescent, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Caryopsis with free soft pericarp, obovoid, 1–1.2 mm long, light brown.

Distribution (TDWG). Continent. Europe (*), Pacific, North America, South America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **North-central Pacific.** Samoa. Hawaii. **Northwest USA, Northeast USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Western South America, Brazil, Southern South America.** Belize, Costa Rica, Honduras, Nicaragua. Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti, Jamaica, Leeward Is, Puerto Rico. Bolivia, Colombia, Ecuador, Peru. Brazil Southeast. Argentina Northeast, Argentina South, Paraguay, Uruguay.

TDWG4. Buenos Aires, Entre Rios. Río Negro. Guanajuato. Baja California, Sinaloa, Sonora. Guerrero, Jalisco, Nayarit, Oaxaca. Chiapas.

Diplachne gigantea Launert. *Bol. Soc. Brot.*, 47: 349 (1973).

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, Mbala: Vesey-FitzGerald 1551 (K holo, BM, SRGH).

Recent Synonyms: *Leptochloa gigantea* (Launert) Cope & Snow, *Novon* 8:79 (1998).

Illustrations (Books): G.V.Pope et al., *Flora Zambesiaca* 10 (2(1999):27, t. 12).

Derivation (Clifford & Bostock 2007): *L. very large*. Culms tall compared with those of related species.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 160–270 cm long. Ligule an eciliate membrane, 4–6 mm long, lacerate, acute. Leaf-blades flat or convolute, 30–65 cm long, 4–5 mm wide,

stiff, mid-green or grey-green. Leaf-blade midrib widened. Leaf-blade surface scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence composed of racemes. Racemes numerous, 20–50, borne along a central axis, spreading or ascending, flexuous, unilateral, 12–20 cm long. Central inflorescence axis 13–30 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, lax. Spikelets solitary. Fertile spikelets pedicelled or sessile. Pedicels absent or present, filiform.

Fertile Spikelets. Spikelets comprising 8–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed slightly, 10–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes eventually visible between lemmas.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate or oblong, 2.2–3.2 mm long, 0.7–0.8 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate or oblong, 3.2–3.8 mm long, 0.8–0.9 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins absent. Upper glume apex acute, mucronate.

Florets. Fertile lemma oblong, 3.6–4.8 mm long, membranous, dark green or grey, without keel, 3 -veined, 0–3 -veined. Lemma midvein eciliate. Lemma lateral veins close to margins. Lemma margins pubescent, hairy below. Lemma apex entire, acuminate, mucronate (0.25–0.5mm). Palea 2 -veined. Palea keels scabrous. Palea surface pubescent, hairy on flanks. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 1.4–2.1 mm long. Caryopsis with adherent pericarp, ellipsoid or oblong, flattened, concavo-convex, 1.5–2 mm long.

Distribution (TDWG). Continent. Africa.

Country /Province /State. East tropical Africa, South tropical Africa, Southern Africa. Tanzania. Angola, Zambia. Botswana.

Diplachne Genus

Disakisperma dubia (Kunth) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1327 (2012).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Chloris dubia* H. B. & K., *Nov. Gen. et Sp.* 1: 169 (1815). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mexico, Tomepanda: Humboldt & Bonpland (P holo).

Recent Synonyms: *Leptochloa dubia* (HBK) Nees, *Syll. Ratisb. i. 4; Agrost. Bras.* 433 (1824).

Illustrations (Books): S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (294), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (55), F.W.Gould, *The Grasses of Texas* (1975) (227, Fig. 117), S.A.Renvoize, *Gramineas de Bolivia* (1998) (298, Fig 61), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 17, Fig. 3 (2001)).

Derivation (Clifford & Bostock 2007): L. doubtful. Readily confused with other species.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths glabrous or pilose. Basal innovations flabellate. Culms 30–110 cm long, wiry. Lateral branches lacking. Leaf-sheaths glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades flat or involute, 5–30 cm long, 2–8 mm wide, glaucous. Leaf-blade surface glabrous or pilose, sparsely hairy.

Inflorescence. Inflorescence composed of racemes. Racemes 2–15, borne along a central axis, ascending or spreading, flexuous, unilateral, 4–12 cm long. Central inflorescence axis 5–20 cm long. Rhachis semiterete. Spikelet packing broadside to rhachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–8 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 5–10 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 3.5–4.5 mm long, 0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume lanceolate, 4–5 mm long, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 3.5–5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma margins eciliate or pubescent. Lemma apex emarginate, muticous or mucronate. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.5 mm long. Caryopsis with adherent pericarp.

2n = 60 (1 ref TROPICOS).

Distribution (TDWG). Continent. Pacific, North America, South America.

Country /Province /State. **North-central Pacific.** Hawaii. **Northwest USA, North-central USA, Southwestern USA, South-central USA, Southeastern USA, Mexico.** Colorado. Oklahoma. Arizona, California. New Mexico, Texas. Florida, Louisiana. Central Mexico, Northeast Mexico, Northwest Mexico, Southwest Mexico. **Mesoamerica, Western South America, Brazil, Southern South America.** Honduras. Bolivia, Colombia, Ecuador, Peru. Argentina Northeast, Argentina Northwest, Chile North.

TDWG4. Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Distrito Federal, Formosa, La Pampa, Misiones. Distrito Federal, Mexico State, Morelos, Puebla. Aguascalientes, Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, Neuvo Leon, Queretaro, San Luis Potosi, Tamaulipas, Zacatecas. Baja California, Baja California Sur, Sinaloa, Sonora. Jalisco, Michoacan, Oaxaca. Campeche, Chiapas, Yucatan.

Disakisperma eleusine (Nees) P.M.Peterson & N.Snow. *Ann. Bot.* 109: 1327 (2012).

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:** *Diplachne eleusine* Nees, *Fl. Afr. Austr.* 254 (1841). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: South Africa, Katrivierspoort: Drege ; South Africa, Basche R.: Drege s.n. ; South Africa, Gekau: Drege sn.

Recent Synonyms: *Leptochloa eleusine* (Nees) Cope & Snow, *Novon* 8:78 (1998).

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (120, Fig 91as *Diplachne*).

Images: F.van Oudtshoorn, *Guide to Grasses of Southern Africa* (1999) (as *Leptochloa*).

Derivation (Clifford & Bostock 2007): the Greek town where Ceres, Goddess of the harvest was worshipped.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms geniculately ascending, 50–120 cm long. Ligule a ciliolate membrane, 1.5 mm long. Leaf-blades 10–20 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 2–8, borne along a central axis, unilateral, 4–10 cm long. Central inflorescence axis 5–15 cm long. Spikelet packing broadside to rachis, regular, 2 -rowed. Spikelets solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 3 mm long, 0.8–0.9 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 3.5 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex acute.

Florets. Fertile lemma oblong, 3.5 mm long, membranous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma surface glabrous. Lemma margins pubescent. Lemma apex emarginate or obtuse. Palea 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. Africa.

Country /Province /State. **South tropical Africa, Southern Africa.** Mozambique. Namibia, Botswana, Limpopo, North-West, Gauteng, Mpumalanga, Swaziland, Free State, Kwazulu-Natal, Eastern Cape.

Disakisperma obtusiflora (Hochst.) P.M.Peterson & N.Snow.

Basionym or Replaced Name: *Leptochloa obtusiflora* Hochst., *Flora* 38: 203 (1855).

Distribution (TDWG). Continent. Africa, Tropical Asia.

Country /Province /State. **West-central tropical Africa, Northeast tropical Africa, South tropical Africa.** DRC. Ethiopia (inc. Eritrea), Sudan. Angola. **Indian Subcontinent.** India. Tamilnadu.

Dissanthelium aequale Swallen & Tovar. *Phytologia*, 11: 368 (1965).

Regarded by K as a synonym (*D. laxifolium*).

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *G. Mandon 1292A*, no date, Bolivia (US-1818422).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. aequus*, equal; *-alis*, pertaining to. Glumes or lemmas similar in length.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms erect, 13–16 cm long. Culm-internodes antrorsely scabrous. Leaf-sheaths smooth or scaberulous. Ligule an eciliate membrane, 1–2.5 mm long. Leaf-blades erect or ascending, involute, 6–10 cm long, 1–2 mm wide. Leaf-blade surface pubescent, hairy adaxially. Leaf-blade apex abruptly acute or acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate, 3.5–4.5 cm long, 0.7 cm wide, bearing few spikelets. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2(–3) fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5.7–6.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein scaberulous. Lower glume lateral veins obscure. Lower glume apex acute. Upper glume lanceolate, 5.7–6.3 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scaberulous. Upper glume lateral veins obscure. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 5.5–5.8 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma apex acute. Palea keels ciliate.

Flower and Fruit. Anthers 3. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia.

Dissanthelium amplivaginatatum Tovar. *Publ. Mus. Hist. Nat. Javier Prado, Ser. B, Bot.* 33: 7 (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Tovar, S. Rivas, C. Arnaiz, J. Loidi & P. Canto 9777*, 19 Mar 1983, Peru: Ancash: Prov. Bolognesi: de Pachacoto a la Unisn, alt. 4740 m, puna (USM; IT: MAF, MO-3812378, US-3029240).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 6–8 cm long. Leaf-sheaths inflated, striately veined. Ligule an eciliate membrane, 2.5–4 mm long. Leaf-blades conduplicate, 2.5 cm long, 1 mm wide. Leaf-blade apex abruptly acute or acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong or ovate, 2–3 cm long. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–5.5 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 5–5.5 mm long, 1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 4.8–5 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma apex acute.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium breve Swallen & Tovar. *Phytologia*, 11: 371 (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.

TYPE from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Tovar 1161*, 31 Mar 1953, Peru: Huancavelica: Huancavelica Prov. (US-2181263).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. short. Culms short.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 6–8 cm long. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades ascending, conduplicate, 2–5 cm long, 1–2 mm wide. Leaf-blade venation distinct. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, linear, 2–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–3.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 3.5–3.7 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 3.5–3.7 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–2.6 mm long, chartaceous, much thinner above, keeled, 3 -veined, 0–3 -veined. Lemma surface hispidulous. Lemma apex truncate. Palea keels ciliolate, adorned above.

Flower and Fruit. Anthers 3, 0.5–0.6 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia, Peru.

Dissanthelium brevifolium Swallen & Tovar. *Phytologia*, 11: 375 (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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.F. MacBride & W. Featherstone 933*, 25 May 1922, Peru: Junin (US-1161062).

Illustrations (Books): No illustration found (BKS).

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 Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 2–4 cm long. Leaf-sheaths smooth. Ligule an eciliate membrane, 0.6–2 mm long, truncate. Leaf-blades spreading, conduplicate, 0.6–1.5 cm long, 0.5–1 mm wide, coriaceous, stiff. Leaf-blade surface scabrous, rough adaxially. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle contracted, oblong, 0.8–1.5 cm long, 0.6–0.8 cm wide. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3–3.4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.4–0.5 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume ovate, 3–3.4 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 3–3.4 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 2.2–2.5 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scabrous. Lemma apex truncate. Palea keels smooth or scaberulous.

Flower and Fruit. Anthers 3, 0.6–0.8 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium californicum (Nutt.) Benth. *Hook. Ic. Pl. t.* 1375. (1881).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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:** *Stenochloa californica* Nutt., *Proc. Acad. Nat. Sci. Philadelphia* 4: 25 (1848)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Gambel s.n.*, USA: California: Santa Catalina Island (GH; IT: US (fragm. ex GH & rough drawing)). hb. label for drawing has Nuttall script, and header Coll. NUTTALL, Presented by Elias Durand, 1866.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico Vol 24 Poaceae*, part 1 (2007) (700).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From California, USA.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Annual. Culms decumbent, 20–35 cm long. Ligule an eciliate membrane. Leaf-blades flat, 8–13 cm long, 2–4 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, linear, 10–15 cm long. Primary panicle branches ascending, naked below or bearing spikelets almost to the base. Panicle branches flexuous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.5–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acute. Upper glume lanceolate, 2.5–3 mm long, 1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acute.

Florets. Fertile lemma elliptic, 2.1–2.2 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma surface puberulous. Lemma apex acute.

Flower and Fruit. Anthers 3, 0.4 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. North America.

Country /Province /State. Southwestern USA, Mexico. California. Northwest Mexico. Baja California.

Dissanthelium calycinum (Presl) Hitchcock. *Journ. Wash. Acad. Sc.* 13: 224 (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 Peru. **Basionym or Replaced Name:** *Brizopyrum calycinum* J. Presl, *Reliq. Haenk.* 1(4–5): 281 (1830)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T. Haenke s.n.*, Peru (PR).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (160, Fig 38).

Derivation (Clifford & Bostock 2007): Gk. kalyx, cup; -ina, belonging to. The subtending glumes are as long or longer than the lemma thereby resembling a cup.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 2.5–8 cm long. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades involute, 1–3 cm long, 0.5–1 mm wide. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence a panicle. Panicle spiciform, oblong or ovate, 1–2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.4–3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.2–0.3 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 2.4–3 mm long, 1.3–1.4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 1.8–2.1 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma surface asperulous. Lemma apex obtuse or acute. Palea keels scaberulous.

Flower and Fruit. Anthers 3, 0.5–0.7 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. Europe (*), North America, South America.

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). Mexico. Central Mexico. Western South America. Bolivia, Peru.

Mexico State.

Dissanthelium densum Swallen & Tovar. *Phytologia*, 11: 374 (1965).

Regarded by K as a synonym (*D. breve*).

TYPE from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Tovar* 2547, 11 May 1956, Peru: Huancavelica: Huancavelica Prov. (US-2207162).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): dense. Growing in large clumps.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 6–8 cm long. Leaf-sheaths antrorsely scabrous. Ligule an eciliate membrane, 1–2 mm long. Leaf-blades ascending, conduplicate, 2–5 cm long, 1–2 mm wide. Leaf-blade venation distinct. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, linear, 2–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–3.7 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 3.5–3.7 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume lanceolate, 3.5–3.7 mm long, 1.4 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.5–2.6 mm long, chartaceous, much thinner above, keeled, 3 -veined, 0–3 -veined. Lemma surface hispidulous. Lemma apex truncate. Palea keels ciliolate, adorned above.

Flower and Fruit. Anthers 3, 0.5–0.6 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium expansum Swallen & Tovar. *Phytologia*, 11: 374 (1965).

Regarded by K as a synonym (*D. breve*).

TYPE from Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru., *Cook & Gilbert 1305* (HT: US).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): pando, expand. Inflorescence an open panicle.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 6–10 cm long. Leaves mostly basal. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 1–3 mm long. Leaf-blades ascending, flat or conduplicate, 1–4 cm long, 1–2 mm wide. Leaf-blade surface smooth. Leaf-blade margins scabrous. Leaf-blade apex obtuse or abruptly acute.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 2–3.3 cm long, 1.5–2 cm wide. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.5–4 mm long, 1 length of upper glume, membranous, purple, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acute. Upper glume lanceolate, 3.5–4 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, purple, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 2.4–3 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma apex truncate. Palea keels ciliolate, adorned above.

Flower and Fruit. Anthers 3, 0.9–1 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium giganteum O. Tovar. *Publ. Mus. Hist. Nat. Javier Prado*, B, 33: 8 (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Tovar, S. Rivas, C. Arnaiz, J. Loidi & P. Canto 9831*, 22 Mar 1983, Peru: Ancash: de Huaraz a La Unisn, carretera, puna, panojal, alt. 4590 m (USM; IT: MAF, MO-3812371, MO-3099119, US-3029239).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. very large. Culms tall compared with those of related species.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 22–35 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 2.5–5 mm long. Leaf-blades conduplicate, 8–20 cm long, 4 mm wide, stiff.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, linear, 9–11 cm long, 0.5–0.7 cm wide. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 5–5.5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–5.5 mm long, 1 length of upper glume, membranous, 1-keeled. Lower glume primary vein scaberulous. Lower glume apex acute. Upper glume lanceolate, 5–5.5 mm long, 1.6–1.7 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume primary vein scaberulous. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 3–3.5 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma surface scaberulous, rough above. Lemma apex acute.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium laxifolium Swallen & Tovar. *Phytologia*, 11: 370 (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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *E. Cerrate 2627*, 29 May 1956, Peru: Ancash: Bolognesi Prov. (US-2207368).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 8–13 cm long. Ligule an eciliate membrane, 2–2.5 mm long. Leaf-blades involute, 2.5–8 cm long, 2–3 mm wide. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle open, oblong or ovate, 3–4.5 cm long, 1–1.7 cm wide. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.5–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acuminate. Upper glume lanceolate, 3.3–4 mm long, 1.7–2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma oblong, 1.9–2.1 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous, rough above. Lemma apex obtuse. Palea keels smooth or scaberulous.

Flower and Fruit. Anthers 3, 0.4–0.5 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia, Peru.

Dissanthelium longifolium O. Tovar. *Publ. Mus. Hist. Nat. Javier Prado*, B, 33: 9 (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. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Tovar, S. Rivas, C. Arnaiz, J. Loidi, P. Canto 9884*, 23 Mar 1983, Peru: Huanuco: Prov. Dos de Mayo: valle de Huallanca, cisped de Puna con pajonal, alt. 3750–4070 m (USM; IT: MAF, MO-3099117, MO-3812373, US-302941).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; folium, leaf. With long leaf-blades.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 6–10 cm long, 2–3 -noded. Ligule an eciliate membrane. Leaf-blades 3–6 cm long, 1 mm wide.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle contracted, linear, 2–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.7–2.8 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma. Lower glume lanceolate, 2.7–2.8 mm long, 1 length of upper glume, membranous, 1-keeled. Lower glume apex acute. Upper glume lanceolate, 2.7–2.8 mm long, 1 length of adjacent fertile lemma, membranous, 1-keeled. Upper glume apex acute.

Florets. Fertile lemma lanceolate, 2.7–2.9 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein scabrous. Lemma apex acute.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium longiligulatum Swallen & Tovar. *Phytologia*, 11: 369 (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.

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: A. Guerrero *s.n.*, 20 Jan 1926, Bolivia: La Paz (US-1389108).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. longus*, long; ligula, small tongue; -ata, possessing. Ligule long.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms geniculately ascending or decumbent, 12–15 cm long. Leaf-sheaths scaberulous. Ligule an eciliate membrane, 2–6 mm long. Leaf-blades flat or conduplicate, 5–7 cm long, 3–4 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade apex abruptly acute.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, linear or oblong, 5 cm long, 1–1.3 cm wide. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 6–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.4–0.5 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acuminate. Upper glume lanceolate, 6–6.5 mm long, 1.5–1.6 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 3.8–4 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma apex acute.

Flower and Fruit. Anthers 3, 0.6–0.7 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia.

Dissanthelium macusaniense (E. H. L. Krause) R. C.Foster & L. B. Smith. *Phytologia*, 12: 249 (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 Peru. **Basionym or Replaced Name:** *Graminastrum macusaniense* E.H.L. Krause, *Beih. Bot. Centralbl.* 32: 348 (1914)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W.Lechler 1836*, Peru (IT:US-2804471 (fragm.)).

Illustrations (Books): S.A.Renouze, *Gramineas de Bolivia* (1998) (160, Fig 38).

Illustrations (Journals): *Ruizia* (13:150, Fig 16 h-i (1993)).

Derivation (Clifford & Bostock 2007): *L. -ense*, denoting origin. From Macusani, Dept. of Puno, Peru.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Annual. Culms slender, 3–7 cm long. Leaf-sheaths glabrous on surface. Ligule an eciliate membrane, 0.7–1.7 mm long. Leaf-blades ascending, involute, 1–4 cm long, 1–2 mm wide. Leaf-blade surface smooth, glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, oblong, 1–2 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 3.3–4.2 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.4 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate or oblong, 1 length of upper glume, membranous, much thinner on margins, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acute. Upper glume oblong or ovate, 3.3–4.2 mm long, 1.3–1.5 length of adjacent fertile lemma, membranous, with hyaline margins, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acute.

Florets. Fertile lemma ovate, 2.5–2.8 mm long, chartaceous, much thinner above, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma surface puberulous. Lemma apex dentate, 3 -fid, with outer lobes shorter, acute. Palea keels ciliate.

Flower and Fruit. Anthers 3, 0.3 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia, Peru.

TDWG4. Salta.

Dissanthelium peruvianum (Nees & Meyen) Pilger. *Bot. Jahrb.* 37:378 (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. **Basionym or Replaced Name:** *Phalaridium peruvianum* Nees & Meyen, *Gramineae* 29 (1841)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Meyeb 161*, Apr, Peru: Lake Titicaca (B, US (fragm. ex B)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (160, Fig 38).

Illustrations (Journals): *Ruizia* (13:150, Fig 16j-k (1993)).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From Peru.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Annual. Culms geniculately ascending, 2.5–13 cm long. Ligule an eciliate membrane, 1–4 mm long. Leaf-blades flat, 1–4 cm long, 1.5–3 mm wide. Leaf-blade surface glabrous.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, oblong, 1–3.5 cm long, 0.4–0.8 cm wide. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.8–3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.4 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of upper glume, chartaceous, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acute. Upper glume ovate, 2.8–3.5 mm long, 1.3–1.4 length of adjacent fertile lemma, chartaceous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acute.

Florets. Fertile lemma ovate, 2.2–2.5 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma lateral veins close to margins. Lemma surface smooth, glabrous. Lemma apex obtuse.

Flower and Fruit. Anthers 3, 0.3 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia, Peru. Argentina Northwest, Chile North.

TDWG4. Jujuy. Tarapaca.

Dissanthelium pygmaeum Swallen & Tovar. *Phytologia*, 11: 367 (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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *O. Tovar* 2545, 11 May 1956, Peru: Huancavelica: Huancavelica Prov. (US-2207161).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. dwarf. Culms shorter than those of many other species in the genus.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, cushion forming. Culms 2–3 cm long. Ligule an eciliate membrane, 0.7–1 mm long, truncate. Leaf-blades spreading, flat or conduplicate, 1–2 cm long, 1–2 mm wide. Leaf-blade surface pubescent, sparsely hairy, hairy adaxially. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, lanceolate, 1–1.5 cm long, 0.5–0.6 cm wide, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, glabrous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume oblong, 1 length of upper glume, cartilaginous, 1-keeled, 3 -veined. Lower glume lateral veins ribbed. Lower glume surface glabrous. Lower glume apex acute. Upper glume oblong, 4.5–5 mm long, 1.1–1.2 length of adjacent fertile lemma, cartilaginous, 1-keeled, 3 -veined. Upper glume lateral veins ribbed. Upper glume apex acute.

Florets. Fertile lemma ovate, 4–4.5 mm long, cartilaginous, keeled, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness. Lemma surface smooth, glabrous. Lemma apex acute or acuminate.

Flower and Fruit. Anthers 3, 2 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium rauhii Swallen & Tovar. *Phytologia*, 11: 376 (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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *W. Rauh & G. Hirsch P-1418*, 29 May 1957, Peru: Salcantay (US-2180752).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Ambrosius Rauh (1784–1830) German botanist and mineralogist.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 6–9 cm long. Leaf-sheaths smooth. Ligule an eciliate membrane, 4–5 mm long. Leaf-blades ascending, conduplicate, 1.5–3.5 cm long, 1–2 mm wide, coriaceous. Leaf-blade surface scaberulous, rough adaxially. Leaf-blade apex obtuse.

Inflorescence. Inflorescence a panicle. Panicle contracted, oblong, 3–4 cm long, 0.8–1.5 cm wide. Primary panicle branches appressed or ascending. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 2.5–2.6 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets, thinner than fertile lemma, shiny. Lower glume ovate, 2.5–2.6 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 2.5–2.6 mm long, 1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma ovate, 2.1–2.2 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface pubescent. Lemma apex acute. Palea keels ciliolate.

Flower and Fruit. Anthers 3, 0.6–0.8 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium semitectum Swallen & Tovar. *Phytologia*, 11: 370 (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 Peru. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *J.F. MacBride & W. Featherstone 1155*, 12 Jun 1922, Peru: Junin (US-1161061).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. semi-, half; tectum, roof.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms decumbent, 9–13 cm long. Leaf-sheaths smooth. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades involute, 4–7 cm long, 1–3 mm wide. Leaf-blade surface scaberulous, rough adaxially, glabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle, shorter than basal leaves. Panicle spiciform, oblong, 3.4–4.5 cm long, 0.8–1 cm wide. Primary panicle branches ascending or spreading. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, villous.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4.6–5.3 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3–0.4 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein smooth or scaberulous. Lower glume apex acuminate. Upper glume lanceolate, 4.6–5.3 mm long, 1.8–2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein smooth or scaberulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 2.5–2.7 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma surface scaberulous. Lemma apex acute. Palea keels scaberulous.

Flower and Fruit. Anthers 3, 0.4–0.5 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Peru.

Dissanthelium trollii Pilger. *Notizbl. Bot. Gart. Berlin*, 11: 778 (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 Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Troll 1966*, Bolivia: La Union (B; IT: US-2379262 (frag. ex B)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (160, Fig 38).

Derivation (Clifford & Bostock 2007): in honor of Carl Troll (1899–1975) German botanist.

Classification. Subfamily Pooideae.

Habit, Vegetative Morphology. Perennial. Rhizomes short. Culms 3–5.5 cm long. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades flat or involute, 1.5–3 cm long, 1–2 mm wide. Leaf-blade surface scaberulous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle spiciform, lanceolate, 1.3–2 cm long, 0.5 cm wide, bearing few spikelets. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 4.5–5 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 0.3 mm long.

Glumes. Glumes persistent, similar, reaching apex of florets or exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume lateral veins obscure. Lower glume apex acute. Upper glume ovate, 4.5–5 mm long, 1.1–1.2 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume lateral veins obscure. Upper glume apex obtuse.

Florets. Fertile lemma ovate, 4–4.3 mm long, chartaceous, keeled, 3 -veined, 0–3 -veined. Lemma midvein without distinctive roughness. Lemma surface smooth, glabrous. Lemma apex obtuse.

Flower and Fruit. Anthers 3, 2–2.2 mm long. Ovary glabrous. Endosperm farinose.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America. Bolivia, Peru.

Dissochondrus biflorus (Hillebr.) O. Kuntze. *Engl. & Prantl, Pflanzenf. Nachtr.* 1: 41 (1897).

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. **Basionym or Replaced Name:** *Setaria biflora* Hillebr., *Fl. Haw. Isl.* 503 (1888). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hawaii, Lanai: Hillebrand (K iso).

Illustrations (Books): W.L.Wagner et al., *Manual of the Flowering Plants of Hawai'i*, Vol. 2 (1990) (1533, Pl. 226).

Derivation (Clifford & Bostock 2007): L. bis, twice; flos, flower. Florets two per spikelet.

Classification. Subfamily Panicoideae. Tribe: Paniceae. Subtribe SETARIINAE.

Habit, Vegetative Morphology. Perennial. Culms 60–120 cm long. Culm-nodes pubescent. Leaf-sheaths keeled. Leaf-sheath auricles erect. Ligule an eciliate membrane. Leaf-blade base with a false petiole. Leaf-blades 15–30 cm long, 10–20 mm wide. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Peduncle pubescent above. Panicle spiciform, linear, 10–20 cm long. Primary panicle branches simple, sterile at the tips (bristles 5–10mm). Panicle axis with rounded ribs, pubescent. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, oblong, 0.5 mm long, pubescent, tip cupuliform.

Fertile Spikelets. Spikelets comprising 2 fertile florets, without rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, dorsally compressed, 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, 3 -veined. Lower glume surface puberulous. Lower glume apex obtuse. Upper glume ovate, chartaceous, without keels, 9 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Fertile lemma ovate, 2 mm long, coriaceous, shiny, without keel. Lemma margins involute. Lemma apex acute. Palea coriaceous.

Distribution (TDWG). Continent. Pacific.

Country /Province /State. North-central Pacific. Hawaii.

Distichlis acerosa (Griseb.) H.L.Bell & Columbus. *Syst. Bot.* 33 3): 548 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Halochloa acerosa* Griseb., *Symb. Fl. Argent.* 285–286 (1879). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Lorentz & Hieronymus* 488, 11 Nov 1872, Argentina: Córdoba: en el medio de la Salina Grande, al lado del camino a Catamarca (CORD, US (fragm. ex GOET)).

Recent Synonyms: *Monanthochloe acerosa* (Griseb.) Speg., *Anal. Mus. Nac. Buenos Aires* 7:194 (1902).

Illustrations (Books): E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (350, Fig. 120).

Derivation (Clifford & Bostock 2007): L. acer, sharp; -osa, abundance. Lemmas terminating in a sharp point.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present, with alternating elongated and bunched internodes. Culms decumbent, 8–15 cm long, wiry. Leaves cauline, distichous. Leaf-sheaths longer than adjacent culm internode. Ligule a ciliolate membrane. Leaf-blades aciculate, conduplicate or involute, 0.5–2 cm long, 1–2 mm wide, indurate, stiff. Leaf-blade surface ribbed. Leaf-blade apex acute, pungent. Dioecious.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, shorter than basal leaves, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite.

Glumes. Glumes both absent or obscure.

Florets. Fertile florets female. Fertile lemma elliptic, 6–8 mm long, coriaceous, without keel, 7–9 -veined, more than 3-veined. Lemma apex acute. Palea tightly convolute around flower, 1 length of lemma, indurate, 2 -veined. Palea keels winged, with toothed wings. Apical sterile florets distinct from fertile.

Flower and Fruit. Caryopsis 2 mm long, apex bicornate. Embryo 0.66 length of caryopsis.

Male inflorescence similar to female, of few spikelets (1 spikelet). Male spikelets similar to female but less developed, 3–10 flowered, lanceolate. Male spikelet glumes absent. Male spikelet lemma 5–7 -veined, mucous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest, Argentina Northeast.
TDWG4. La Rioja, Santiago del Estero, San Luis. Cordoba.

Distichlis australis (Speg.) Viilamil. *Kurtziana* 5:390 (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 *Monanthochloe australis* Speg., *Anales Mus. Nac. Hist. Nat. Buenos Aires* 7: 196 (1902)

Basionym or Replaced Name: *Monanthochloe australis* Speg., *Anal. Mus. Buenos Aires*, 7: 194. (1902).
T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Ameghino s.n.*, 1899, Argentina: Santa Cruz: entre San Julian y Rio Deseado (CORD).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (491, Fig. 331).

Derivation (Clifford & Bostock 2007): L. of the south. From the south in general as from Africa, America, Europe or elsewhere.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 2–5 cm long. Leaves distichous. Leaf-sheaths 0.2–0.3 cm long, longer than adjacent culm internode. Ligule a ciliolate membrane, 0.2 mm long. Leaf-blades conduplicate, 0.1–0.5 cm long, 0.5–1 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, pubescent, hairy adaxially. Leaf-blade apex obtuse, mucous. Dioecious.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, shorter than basal leaves. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, 1–5 mm long, glabrous.

Fertile Spikelets. Spikelets comprising 1–2 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3.5–4 mm long, 1 length of upper glume, scarious, 1-keeled, 3 -veined. Lower glume apex obtuse. Upper glume ovate, 3.5–4 mm long, 1 length of adjacent fertile lemma, scarious, 1-keeled, 5–7 -veined. Upper glume apex obtuse.

Florets. Fertile florets female. Fertile lemma ovate, 3.5–4 mm long, coriaceous, keeled, 5–11 -veined, more than 3-veined. Lemma apex obtuse. Palea coriaceous, 2 -veined. Palea keels winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 1.8 mm long.

Male inflorescence similar to female. Male spikelets similar to female but less developed, 1–3(–4) flowered, persistent, elliptic, 5 mm long. Male spikelet glumes 2. Male spikelet lemma 7–9 -veined, mucous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South.

TDWG4. Chubut, Río Negro, Santa Cruz.

Distichlis bajaensis H.L.Bell. *Madrono* 57: 59 (2010).

TYPE from Mexico. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Baja California, Municipio de Ensenada, salt marsh in arroyo 1 km SW of Rosarito, area dominated by juncus and salt grasses, heavily grazed by burros and goats, October 1968, *Stephenson 68–304a* (holotype: MSC 216526! [not MSC 216528 or 289874]). Paratype: MEXICO, Baja California, Municipio de Ensenada, southwest of El Nuevo Rosarito, 28u369400N, 114u039030W, 100 m elevation, broad, dry arroyo with alkaline seeps, growing with *Distichlis spicata* (L.) Greene, *Juncus acutus* L., *Allenrolfea* sp., *Lycium* sp., and *Salicornia* sp., 2 April 2008, *Bell 458*, (BCMEX, MEXU, MO, RSA, UC, US).

Illustrations (Journals): *Madrono* (57: 60, Fig.8 (2010)).

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Northwest Mexico.

Baja California.

Distichlis distichophylla Fassett. *Rhodora*, 27: 71 (1925).

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:** *Uniola distichophylla* Labill., *Nov. Holl. Pl.* 1: 21, t. 24 (1804). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Habitat in capite Van-Diemen,.

Illustrations (Books): J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (354, Fig 288), N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (556, Fig 111), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (224), K.O.Mallett (ed.), *Flora of Australia*, Vol 44B. *Poaceae* (2004) (425, Fig 76), D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002).

Images: D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002);, K.O.Mallett (ed.). *Flora of Australia*, Vol 44 A (2002) & Vol 44B (2004). *Poaceae*;

Derivation (Clifford & Bostock 2007): Gk. distichos, in two rows; phyllon, leaf. Leaves arranged conspicuously in two rows.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect or geniculate ascending, 20–30 cm long. Leaves cauline, distichous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 0.5–1 mm long. Ligule a fringe of hairs, 0.5 mm long. Leaf-blades flat or involute, 2–4 mm wide. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex pungent. Dioecious.

Inflorescence. Inflorescence composed of racemes. Racemes 2–10, borne along a central axis, closely spaced, in a head, paucilateral, 1–2 cm long, bearing few fertile spikelets. Central inflorescence axis 2.5–5 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear, 1–4 mm long.

Fertile Spikelets. Spikelets comprising 6–14 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 10–20 mm long, 3–5 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3–4.5 mm long, 0.9 length of upper glume, scarious, 1-keeled, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 3.5–5 mm long, 0.7–0.8 length of adjacent fertile lemma, scarious, 1-keeled, 7–9 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 3–6.5 mm long, coriaceous, keeled, 12 -veined, more than 3-veined. Lemma apex acute. Palea 0.9 length of lemma, coriaceous, 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 2.5–3 mm long.

Male inflorescence similar to female, of racemes along a central axis. Male spikelets similar to female but less developed.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. Western Australia, South Australia, Victoria, Tasmania.

TDWG4. South-West. NW & Lake Eyre, Southern. Western Plains.

Distichlis eludens (Soderstr. & H. F. Decker) H.L.Bell & Columbus. *Syst. Bot.* 33 3): 548 (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, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Mexico. **Basionym or Replaced Name:** *Reederochloa eludens* Soderstr. & H. F. Decker, *Brittonia*, xvi. 335 (1964). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *T.R. Soderstrom* 798, 29 Sep 1959, Mexico: Durango: 1 mi S of Durango, alkali flats, common in dry heavily trodden path, 6200 ft (US-2378386; IT: K, MEXU, YU).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. eludo, avoid. Not to be confused with a series of closely related species.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Stolons present. Culms 2–11 cm long, 2–5 -noded. Leaves cauline. Ligule an eciliate membrane, 1 mm long, erose. Leaf-blades filiform, involute, 1.5–4 cm long, 0.2–0.5 mm wide. Leaf-blade apex obtuse. Dioecious.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 2–4 fertile spikelets, shorter than basal leaves. Spikelets solitary. Fertile spikelets sessile. Male spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 5–11 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3–3.5 mm long, 0.75 length of upper glume, membranous, without keels, 2–8 -veined. Lower glume margins ciliate (below). Lower glume apex acute. Upper glume lanceolate, 3.5–4.3 mm long, 0.75 length of

adjacent fertile lemma, herbaceous, without keels, 8 -veined. Upper glume margins ciliolate (below). Upper glume apex acute.

Florets. Fertile florets imbricate to tip, female. Fertile lemma ovate, 5–6.2 mm long, coriaceous, without keel, 10–13 -veined, more than 3-veined. Lemma lateral veins obscure. Lemma margins ciliate, hairy below. Lemma apex acute. Palea tightly convolute around flower, bowed outwards, 1 length of lemma, 2 -veined. Palea keels ciliate, adorned below. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, cuneate, 0.4 mm long, fleshy. Anthers 3, 2–3 mm long. Caryopsis with adherent pericarp, oblong. Embryo 0.4 length of caryopsis.

Male inflorescence similar to female (but long exserted), of few spikelets. Male spikelets distinct from female, 3–8 flowered, persistent, elliptic, 5–13 mm long. Male spikelet glumes 2. Male spikelet lemma 8–10 -veined, muticous.

$2n = 38$ (1 ref TROPICOS).

Distribution (TDWG). Continent. North America.

Country /Province /State. Mexico. Northeast Mexico.

TDWG4. Durango, San Luis Potosi.

Distichlis humilis Phil. *Anal. Mus. nac. Chile* 86 (1892).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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: *Philippi s.n.*, Chile: prope Antofagasta (SGO-PHIL-372; IT: SGO-37532, SGO-63453, US-556517 (fragm ex SGO-PHIL-372 & photo), US- (photo SGO-37532)).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (290, Fig 59).

Derivation (Clifford & Bostock 2007): L. low growing. Short-statured in comparison with related species often prostrate.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, cushion forming. Rhizomes elongated. Culms 2–5 cm long. Leaves distichous. Leaf-sheaths longer than adjacent culm internode. Ligule a ciliolate membrane. Leaf-blades conduplicate, 7–15 cm long, 1 mm wide, coriaceous, stiff. Leaf-blade surface ribbed. Leaf-blade apex pungent. Dioecious.

Inflorescence. Inflorescence composed of racemes or comprising only a few spikelets, comprising 1–3 fertile spikelets, aerial or shorter than basal leaves. Racemes 1, single, paucilateral, 1–1.5 cm long, bearing few fertile spikelets, bearing 1–3 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 3 mm long, 0.75–1 length of upper glume, scarious, 1-keeled, 5 -veined. Lower glume apex acute. Upper glume ovate, 3–4 mm long, 1 length of adjacent fertile lemma, scarious, 1-keeled, 5 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 3–4 mm long, coriaceous, keeled, 9 -veined, more than 3-veined. Lemma apex acute. Palea coriaceous, 2 -veined. Palea keels winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3.

Male inflorescence similar to female. Male spikelets similar to female but less developed, persistent, 6–18 mm long. Male spikelet glumes 2. Male spikelet lemma muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest, Chile North.

TDWG4. Catamarca, Jujuy, La Rioja, Salta, San Juan. Tarapaca, Antofagasta, Atacama.

Distichlis laxiflora Hackel. *An. Mus. Nac. Buenos Aires*, 21: 141 (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 Argentina. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Stuckert 17468*, Argentina: Buenos Aires.

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (491, Fig. 333).

Derivation (Clifford & Bostock 2007): *L. laxus*, loose; flos, flower. Inflorescence an open panicle.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Culms erect, 20–30 cm long, 12–15 -noded. Leaves distichous. Leaf-sheaths pubescent. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.5 mm long, pubescent on abaxial surface. Leaf-blades convolute, 6–11 cm long, 1–2 mm wide, stiff. Leaf-blade apex pungent. Dioecious.

Inflorescence. Inflorescence composed of racemes, comprising 9–25 fertile spikelets, exserted (male) or embraced at base by subtending leaf to enclosed (female). Racemes few, borne along a central axis, closely spaced, appressed, paucilateral, 1–3 cm long, bearing few fertile spikelets. Central inflorescence axis 3–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear.

Fertile Spikelets. Spikelets comprising 5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–9 mm long, 2 mm wide, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3–4 mm long, 0.6–0.8 length of upper glume, scarious, 1-keeled, 3–5 -veined. Lower glume apex acute. Upper glume ovate, 3–4 mm long, 0.6–0.8 length of adjacent fertile lemma, scarious, 1-keeled, 3–5 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5 mm long, coriaceous, keeled, 11 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma apex acute. Palea bowed outwards, coriaceous, 2 -veined. Palea keels winged, narrowly winged, scaberulous. Palea apex caudate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 2–2.5 mm long.

Male inflorescence similar to female, of racemes along a central axis. Male spikelets similar to female but less developed, 5–7 flowered, persistent, oblong, 9–10 mm long. Male spikelet glumes 2, 2–3.5 mm long, membranous. Male spikelet lemma 4 mm long, 9 -veined, muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northeast.

TDWG4. Mendoza, Salta, San Luis. Buenos Aires, Cordoba, La Pampa, Santa Fe.

Distichlis littoralis Engelm.) H.L.Bell & Columbus. *Syst. Bot.* 33 3): 548 (2008).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from USA. **Basionym or Replaced Name:** *Monanthochloe littoralis* Engelm., *Trans. Acad. Sc. St. Louis* i. 436. tt. 13, 14 (1859). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: ST: *J.L. Berlandier 3227*, no date, USA: Texas (Matamoras Region) (MO-1837526, MO-1837527; IST: US-899643).

LT: *Lindheimer 63*, May 1843, USA: Texas: Galveston Island, covering large tracts of moist, sandy, saline soil (MO-1837530; ILT: MO-1837531, MO-1837528). LT designated by Davidse & Pohl, *Fl. Mesoamer.* 6: 258 (1994).

ST: *Lindheimer s.n.*, 1842, USA: Texas: Galveston Island (MO-1837529).

ST: *Lindheimer s.n.*, Sep 1841, USA: Texas: Galveston Island (MO-1837532).

ST: *Drummond s.n.*, USA: Texas (BM).

ST: *Blodgett s.n.*, USA: Florida: Key West.

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 25 *Poaceae*, part 2 (2003) (30), F.W.Gould, *The Grasses of Texas* (1975) (376, Fig. 198), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (46, Fig. 23).

Derivation (Clifford & Bostock 2007): *L. lit(t)us*, sea shore; *-ale*, pertaining to. Sand dune, salt marsh species or river-banks.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present, with alternating elongated and bunched internodes. Culms decumbent, 8–15 cm long, wiry. Culm-internodes alternately elongated and bunched. Leaves cauline, distichous. Leaf-sheaths mostly shorter than adjacent culm internode. Ligule a ciliolate membrane. Leaf-blades aciculate, conduplicate or involute, 0.5–1 cm long, 1–2(–3) mm wide, indurate, stiff, glaucous. Leaf-blade surface ribbed. Leaf-blade apex obtuse. Dioecious.

Inflorescence. Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, shorter than basal leaves, embraced at base by subtending leaf. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile.

Spikelets lanceolate, subterete, 10 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite.

Glumes. Glumes both absent or obscure.

Florets. Fertile florets female. Fertile lemma elliptic, 8 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma apex acute. Palea tightly convolute around flower, 1 length of lemma, indurate, 2 -veined. Palea keels winged, with entire wings. Apical sterile florets distinct from fertile.

Flower and Fruit. Male inflorescence similar to female, of few spikelets (1 spikelet). Male spikelets similar to female but less developed, 2–4 flowered, lanceolate. Male spikelet glumes absent. Male spikelet lemma 9 -veined, muticous.

Distribution (TDWG). Continent. North America, South America.

Country /Province /State. **Southwestern USA, South-central USA, Southeastern USA, Mexico.** California. Texas. Florida, Louisiana. Northeast Mexico, Northwest Mexico, Southwest Mexico, Southeast Mexico. **Caribbean.** Cuba.

Coahuila, Chihuahua, Neuvo Leon, Tamaulipas. Baja California, Baja California Sur, Sinaloa, Sonora. Michoacan, Nayarit, Oaxaca. Campeche, Chiapas, Yucatan.

Distichlis palmeri (Vasey) Fassett ex I. M. Johnston. *Proc. Calif. Acad. Sc. Ser. 4*, 12: 984 (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).

TYPE from Mexico. **Basionym or Replaced Name:** *Uniola palmeri* Vasey, *Gard. & Forest* 2: 401–402, f. 124 (1889)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: LT: *E. Palmer s.n.*, Apr 1889, Mexico: Sonora: Colorado River, Horseshoe Bend, 35 mi S of Lerdo, 12–15 mi from its mouth, pistillate. "Seeds shelled out from the chaff, and used as food by the Cocopa Indians." (US-81764; ILT: IBUG-87337, US-913540, US-913539, US-81763). LT designated by Felger, *Flora of Gran Desierto and Rmo Colorado of northwestern Mexico* 529 (2001).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): in honor of Edward Palmer (1831–1911) United States botanist.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated, scaly. Culms 25–60 cm long. Culm-nodes glabrous. Leaves distichous. Leaf-sheaths longer than adjacent culm internode. Leaf-sheath oral hairs woolly. Ligule a ciliolate membrane. Leaf-blades flat or involute, 4–12 cm long, 3–5 mm wide, coriaceous, stiff. Leaf-blade surface ribbed. Leaf-blade apex pungent. Dioecious.

Inflorescence. Inflorescence a panicle, aerial or shorter than basal leaves. Panicle contracted, linear, 6–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear.

Fertile Spikelets. Spikelets comprising 7–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 25–30 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 6–10 mm long, 0.75 length of upper glume, scarios, 1-keeled, 3 -veined. Lower glume apex acute. Upper glume ovate, 8–15 mm long, 1 length of adjacent fertile lemma, scarios, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 8–15 mm long, coriaceous, keeled, 5–11 -veined, more than 3-veined. Lemma apex acuminate. Palea coriaceous, 2 -veined. Palea keels winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3.

Male inflorescence similar to female. Male spikelets similar to female but less developed, persistent, 15–20 mm long. Male spikelet glumes 2. Male spikelet lemma muticous.

Distribution (TDWG). Continent. North America.

Country /Province /State. **Mexico.** Northwest Mexico.

TDWG4. Baja California, Sonora.

Distichlis scoparia (Kunth) Arech. *An. Mus. Montevideo*, 1: 457 (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 Brazil. **Basionym or Replaced Name:** *Poa scoparia* Nees ex Kunth, *Revis. Gramin.* 2: 535, t. 182 (1829) [1832]

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *Sellow s.n.*, Brasilia meridionalis (LE, LE-TRIN-2501.01 a, US-91379 (fragm.)).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (164, Fig 57), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (436, Fig. 113), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (*Fl. Pat.* 3: 496, Fig. 335 (1978) as *Distichlis scoparia* & *Distichlis scoparia var. erinacea*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (250, Fig. 102).

Derivation (Clifford & Bostock 2007): *L. scopae*, broom; -aria, pertaining to. Inflorescences condensed resembling a broom.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Culms erect, 10–20 cm long, wiry, 4–7 -noded. Leaves distichous. Leaf-sheaths longer than adjacent culm internode. Leaf-sheath oral hairs ciliate, 2–3 mm long. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades aciculate, conduplicate, 1–6 cm long, 0.5–1 mm wide, coriaceous, stiff. Leaf-blade surface ribbed, pubescent, sparsely hairy, hairy adaxially. Leaf-blade apex pungent. Dioecious.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, paucilateral, 1.5–3 cm long, bearing few fertile spikelets, bearing 2–3 fertile spikelets on each. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear.

Fertile Spikelets. Spikelets comprising 5–9 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–15 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 2.5–5 mm long, 0.6–0.8 length of upper glume, scarious, 1-keeled, 1–5 -veined. Lower glume lateral veins absent or distinct. Lower glume apex acute. Upper glume ovate, 4.5–6 mm long, 0.6–0.9 length of adjacent fertile lemma, scarious, 1-keeled, 5–7 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 5–9 mm long, coriaceous, keeled, 7–9 -veined, more than 3-veined. Lemma apex acute. Palea bowed outwards, coriaceous, 2 -veined. Palea keels winged, narrowly winged, scaberulous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3.

Male inflorescence similar to female. Male spikelets similar to female but less developed, persistent, 6–18 mm long. Male spikelet glumes 2. Male spikelet lemma muticous.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northeast, Argentina South, Chile North, Chile Central, Chile South, Uruguay.

TDWG4. Catamarca, La Rioja, Mendoza, Salta, San Juan, San Luis, Tucuman. Buenos Aires, Chaco, Cordoba, Distrito Federal, Entre Rios, La Pampa, Santa Fe. Chubut, Neuquén, Río Negro, Santa Cruz. Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Tarapaca, Antofagasta, Atacama. Coquimbo, Valparaiso, Santiago, Biobio, La Araucania. Los Lagos.

Distichlis spicata (L.) Greene. *Bull. Calif. Acad.* 2, 7: 415 (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), W.D.Clayton & N.Snow, *Key to Pacific Grasses* (2010).

TYPE from USA. **Basionym or Replaced Name:** *Uniola spicata* L., *Sp. Pl.* 71 (1753)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Kalm s.n.*, USA (LINN-89.4). LT designated by Hitchcock, *Contr. U.S. Natl. Herb.* 12: 121 (1908).

Illustrations (Books): K.F.Best, et al, *Prairie Grasses* (1971) (109 as *D. stricta*), M.E.Barkworth et al, *Flora of North America north of Mexico Vol 25 Poaceae*, part 2 (2003) (26), F.W.Gould, *The Grasses of Texas* (1975) (373, Fig. 197 as var. *spicata*), A.S.Hitchcock, *Manual of the Grasses of the West Indies* (1936) (47, Fig. 24), S.A.Renouze, *Gramineas de Bolivia* (1998) (290, Fig 59), E.G.Nicora, *Los Generos de Gramineas de America Austral* (1987) (348, Fig. 119), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (164, Fig. 57), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (496, Fig. 334), B.Rosengurt, *Gramineas Uruguayas I* (1970) (250, Fig. 102).

Illustrations (Journals): *Ruizia* (13:252, Fig 29m (1993)).

Derivation (Clifford & Bostock 2007): *L. spica*, thorn; -ata, possessing; Inflorescence a spike or spicate panicle.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 10–60 cm long. Culm-nodes glabrous. Leaves cauline, distichous. Leaf-sheaths longer than adjacent culm internode. Ligule a ciliolate membrane. Leaf-blades involute, 2–8(–20) cm long, 1–4 mm wide. Leaf-blade surface ribbed. Leaf-blade apex pungent. Dioecious.

Inflorescence. Inflorescence composed of racemes. Racemes 2–10, borne along a central axis, closely spaced, in a head, paucilateral, 1–2 cm long, bearing few fertile spikelets. Central inflorescence axis 2.5–8 cm long. Rhachis angular. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, linear.

Fertile Spikelets. Spikelets comprising 5–15 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 6–18(–28) mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume ovate, 0.9 length of upper glume, scarious, 1-keeled, 3–9 -veined. Lower glume apex acute. Upper glume ovate, 1 length of adjacent fertile lemma, scarious, 1-keeled, 3–9 -veined. Upper glume apex acute.

Florets. Fertile florets female. Fertile lemma ovate, 3–6 mm long, coriaceous, keeled, 5–11 -veined, more than 3-veined. Lemma apex acute. Palea coriaceous, 2 -veined. Palea keels winged, narrowly winged. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3, 2 mm long.

Male inflorescence similar to female, of racemes along a central axis. Male spikelets similar to female but less developed, 5–20 flowered, persistent, ovate, 6–18 mm long. Male spikelet glumes 2. Male spikelet lemma 5–11 -veined, muticous.

Distribution (TDWG). Continent. Pacific, North America, South America.

Country /Province /State. **North-central 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. New Brunswick, Nova Scotia, Prince Edward I. Colorado, Idaho, Montana, Oregon, Washington, Wyoming. Connecticut, Rhode Island. Arizona, California, Nevada, Utah. New Mexico, Texas. Florida, Louisiana. Central Mexico, Northeast Mexico, Gulf (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Caribbean, Northern South America, Western South America, Southern South America.** Belize, Guatemala. Bahamas, Cayman Is, Cuba, Dominican Republic, Haiti. Bolivia, Colombia, Ecuador, Galapagos, Peru. Argentina Northeast, Argentina South, Argentina Northwest, Chile North, Chile Central, Chile South, Uruguay.

TDWG4. Catamarca, Jujuy, La Rioja, Mendoza, Salta, San Juan, San Luis. Buenos Aires, Chaco, Cordoba, Corrientes, Distrito Federal, Entre Rios, La Pampa, Santa Fe. Chubut, Neuquén, Río Negro, Santa Cruz. Tarapaca, Antofagasta, Atacama. Coquimbo, Valparaiso, Santiago, Maule, Biobio, La Araucania. Los Lagos. Distrito Federal, Mexico State, Morelos, Puebla, Tlaxcala. Coahuila, Chihuahua, Durango, Guanajuato, Hidalgo, San Luis Potosi, Zacatecas. Veracruz. Baja California, Baja California Sur. Jalisco, Michoacan. Yucatan.

Douglasdeweya deweyi (Jensen, Hatch & Wipff) Yen, Yang & Baum. *Canad. J. Bot.* 83:417 (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), T.G.Tutin et al, *Flora Europaea* 5 (1980), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from Russia. **Basionym or Replaced Name:** *Pseudoroegneria deweyi* K.B. Jensen, S.L. Hatch & Wipff, *Canad. J. Bot.* 70(5): 907, f. 4 (1992). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Plant grown from seed, U.S. Plant Introduction (PI-531756) as part of the U.S. Living Collection of the Perennial Triticeae Grasses at the Evans Research Farm C-18–19 at Logan, Utah, August 1990. Seed obtained from Vladin G. Tanfielv at the Stravropol Botanical Garden U.S.S.R. in 1977 and collected in the Karachayevo-Cherkesskaya Avtonomnaya Oblast' Region of the former U.S.S.R., *Dewey "Stravropol BG"* (HT: US; IT: K, LE, TAES, UT).

Recent Synonyms: *Triticum fragile* Roth, *Catalecta*, fasc. 2: 7 (1800). *Agropyron fragile* (Roth) P. Candargy, *Arch. Biol. Veg. Pure Appl.* 1: 58 (1901).

Agropyron sibiricum (Willd.) Beauv, *Agrost.* 102 (1812).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (280).

Derivation (Clifford & Bostock 2007): L. weak. Inflorescences readily disarticulating.

Classification. Subfamily Pooideae. Tribe: Triticeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 30–80 cm long. Ligule an eciliate membrane. Leaf-blades flat or convolute, 6–15 cm long, 2–4 mm wide.

Inflorescence. Inflorescence composed of racemes. Racemes 1, single, bilateral, 5–15 cm long, 5–12 mm wide. Spikelet packing broadside to rhachis, crowded. Rhachis internodes oblong. Spikelets ascending, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 5–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 8–13 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 5–7 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 1 -veined. Lower glume primary vein eciliate or ciliate. Lower glume lateral veins absent. Lower glume surface smooth or asperulous. Lower glume apex acuminate, mucicous or awned, 1 -awned, awn 0–1.5 mm long. Upper glume lanceolate, 5–7 mm long, 0.8 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 1 -veined. Upper glume primary vein eciliate or ciliate. Upper glume lateral veins absent. Upper glume surface smooth or asperulous. Upper glume apex acuminate, mucicous or awned, 1 -awned, awn 0–1.5 mm long.

Florets. Fertile lemma elliptic, 6–8.5 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma apex acute, mucicous or awned, 1 -awned. Principal lemma awn 0–1 mm long overall. Palea keels ciliate, with 12–40 enations per keel. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Anthers 3.5–4 mm long. Ovary with a fleshy appendage below style insertion, pubescent on apex. Caryopsis with adherent pericarp, oblong, sulcate on hilar side, hairy at apex, apex fleshy. Embryo 0.2 length of caryopsis. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. Europe, Temperate Asia.

Region. Eastern Europe.

Country /Province /State. East European Russia. Siberia, **Middle Asia, Caucasus, China, Mongolia.** Kazakhstan, Kirgizistan, Turkmenistan, Tadzhikistan, Uzbekistan. Inner Mongolia, Xinjiang. Mongolia.

TDWG4. Hebei. Nei Mongol.

Douglasdeweya wangii C. Yen, J.L. Yang & B.R. Baum. *Canad. J. Bot.* 83(4): 416–417, f. 1–3 (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), 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).

TYPE from Russia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Grown from seed collected in Northeastern Iran, Tabriz road to Ahar (collectors C. Nowak and D.R. Dewey, PI 401328), obtained from USDA, National Plant Germplasm System, National Small Grains Research Facility, National Small Grains Collection, 1691 S 2700 W, Aberdeen Idaho 8321, *Anonymous s.n.* (HT: SAUTI-9109; IT: SAUTI (2 sheets))

Recent Synonyms: *Triticum desertorum* Fisch. ex Link, *Enum. Hort. Berol.* 1: 97 (1821). *Agropyron desertorum* (Fisch. ex Link) Schult., *Mant.* 2: 412 (1824).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 616 as *Agropyron desertorum* var. *desertorum* & *A. desertorum* var. *pilosiusculum*).

Derivation (Clifford & Bostock 2007): *L. desertum*, desert. Of deserts, that is, from arid places.

Classification. Subfamily Pooideae. Tribe: Triticeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms geniculately ascending, 25–50 cm long. Lateral branches lacking. Leaf-sheath oral hairs lacking. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blades convolute, 4–12 cm long, 2–3 mm wide. Leaf-blade surface scaberulous, rough adaxially.

Inflorescence. Inflorescence composed of racemes. Peduncle scaberulous above. Racemes 1, single, linear, bilateral, 2.5–8 cm long, 5–9 mm wide. Spikelet packing broadside to rhachis. Rhachis internodes oblong, 0.5 length of fertile spikelet. Spikelets ascending, solitary. Fertile spikelets sessile.

Fertile Spikelets. Spikelets comprising 3–6 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, compressed strongly, 7–12 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume lanceolate, 3–4.5 mm long, 1 length of upper glume, coriaceous, 1-keeled, keeled all along, 3 -veined. Lower glume surface glabrous or pilose. Lower glume apex acute, awned, 1 -awned, awn 2–3 mm long. Upper glume lanceolate, 3–4.5 mm long, 0.6–0.75 length of adjacent fertile lemma, coriaceous, 1-keeled, keeled all along, 3 -

veined. Upper glume lateral veins convergent at apex. Upper glume surface glabrous or pilose. Upper glume apex acute, awned, 1 -awned, awn 2–3 mm long.

Florets. Fertile lemma elliptic, 5–6 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma surface glabrous or pilose. Lemma apex acute, awned, 1 -awned. Principal lemma awn 1–3 mm long overall. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2. Anthers 4 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp.

$2n = 28$ (3 refs TROPICOS).

Distribution (TDWG). **Continent.** Europe, Temperate Asia, Tropical Asia, North America (*).

Region. Northern Europe (*), Eastern Europe.

Country /Province /State. : GB Aliens (Ryves et al). Krym, Central European Russia, East European Russia, South European Russia. Siberia, Middle Asia, Caucasus, Western Asia, China, Mongolia, Russia. Kazakhstan, Tadjikistan. Iran. Inner Mongolia, China North-Central, Qinghai, Xinjiang. Mongolia. **Indian Subcontinent.** Pakistan. Northwest USA, North-central USA, Northeast USA, Southwestern USA. Colorado, Montana, Wyoming. North Dakota, South Dakota. New York. Arizona, California, Nevada, Utah.

TDWG4. Shanxi. Ningxia.

Dregeochloa calviniensis Conert. *Senck. Biol.* 47: 340 (1966).

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, Calvinia: Dikkers (M holo, FR, K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): L. -ensis, denoting origin. From Calvinia, Cape Province, South Africa.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Culms 15–25 cm long. Leaf-sheath oral hairs lacking or scanty. Ligule a fringe of hairs, 0.4 mm long. Leaf-blades erect, aciculate, convolute, 1–6 cm long, 0.6–1 mm wide, stiff, glaucous. Leaf-blade surface ribbed, glabrous or pubescent. Leaf-blade apex acute, pungent.

Inflorescence. Inflorescence a panicle. Panicle contracted, elliptic, 3–5 cm long, 1 cm wide, bearing few spikelets. Primary panicle branches simple. Panicle branches scabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.2–4 mm long, bearded, with longer hairs above, obtuse. Floret callus hairs 0.3–0.4 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–15 mm long, 1.1 length of upper glume, scarious, without keels, 5 -veined. Lower glume surface pubescent, hairy above. Lower glume apex acute. Upper glume lanceolate, 9–14 mm long, 2 length of adjacent fertile lemma, scarious, without keels, 5 -veined. Upper glume surface pubescent, hairy above. Upper glume apex acute.

Florets. Fertile lemma oblong, 4.5–6 mm long, coriaceous, without keel, 9 -veined, more than 3-veined. Lemma surface glabrous, with a transverse row of hair tufts, bearing 6 hair tufts in all. Lemma hairs 2–2.5 mm long. Lemma apex lobed, 2 -fid, with lanceolate lobes, incised 0.5–0.6 of lemma length, acuminate, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, 8–10 mm long overall, with twisted column. Lateral lemma awns present, arising on apex of lobes, 1.5 mm long, shorter than principal. Palea 0.5 length of lemma, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, glabrous. Anthers 3, 3.5 mm long. Ovary pubescent all over. Caryopsis with free brittle pericarp, 2.5 mm long. Embryo 0.2–0.33 length of caryopsis. Hilum punctiform.

Distribution (TDWG). **Continent.** Africa.

Country /Province /State. Southern Africa. Northern Cape.

Dregeochloa pumila (Nees) Conert. *Senck. Biol.* 47: 338 (1966).

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:** *Danthonia pumila* Nees, *Fl. Afr. Austral. Ill.* 323 (1841)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: South Africa, Garip R.: Drege.

Illustrations (Books): L.K.A. Chippindall, *Grasses and Pastures of South Africa* (1955) (246, Fig 217 as *Danthonia*), G.E. Gibbs Russell et al, *Grasses of Southern Africa* (1990) (118, Fig 71).

Derivation (Clifford & Bostock 2007): L. dwarf, low growing. Habit typically depauperate.

Classification. Subfamily Arundinoideae. Tribe: Arundineae.

Habit, Vegetative Morphology. Perennial, caespitose. Rhizomes short. Butt sheaths coriaceous. Culms 2.5–10 cm long, rooting from lower nodes. Leaves mostly basal. Leaf-sheath oral hairs pubescent. Ligule a fringe of hairs. Leaf-blades erect, deciduous at the ligule, aciculate, flat or involute, 1–3 cm long, stiff, glaucous. Leaf-blade surface ribbed, pubescent. Leaf-blade apex obtuse, mucicous or pungent, apiculate.

Inflorescence. Inflorescence a panicle or composed of racemes. Panicle contracted, 1–4 cm long, bearing few spikelets. Primary panicle branches simple. Panicle branches pubescent. Racemes 1, single, multilateral, bearing few fertile spikelets. Rhachis pubescent on surface. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 6–10 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 8–14 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 0.5–1 mm long, bearded, obtuse. Floret callus hairs 0.3–0.4 length of lemma.

Glumes. Glumes persistent, similar, reaching apex of florets or shorter than spikelet, thinner than fertile lemma. Lower glume elliptic, 8–14 mm long, 1 length of upper glume, scarious, without keels, 5–7 -veined. Lower glume surface puberulous. Lower glume apex acute. Upper glume elliptic, 8–14 mm long, 2 length of adjacent fertile lemma, scarious, without keels, 5–7 -veined. Upper glume surface puberulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 4.5–5.5 mm long, coriaceous, without keel, 9–10 -veined, more than 3-veined. Lemma surface pubescent, with a transverse row of hair tufts, bearing 6–8 hair tufts in all. Lemma apex lobed, 2 -fid, incised 0.33 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 4–8 mm long overall, with twisted column. Palea 0.5 length of lemma, 2 -veined. Palea keels ciliolate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, fleshy, glabrous. Anthers 3, 2–3 mm long. Ovary pubescent all over. Caryopsis with free brittle pericarp, 1.2 mm long.

N = 21 (2 refs TROPICOS).

Distribution (TDWG). Continent. Africa.

Country /Province /State. Southern Africa. Namibia, Northern Cape.

Drepanostachyum ampullare (T.P. Yi) Demoly. *Bambou* 46:7 (2005).

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. **Basionym or Replaced Name:** *Fargesia ampullaris* T.P. Yi, *J. Bamboo Res.* 2(2): 18, pl. 1 (1983). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Xizang: Zhangmu, ca. 2200 m, 4 Nov. 1979, *M.L. Zhou* 4 (HT: SIFS).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 126).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 200–540 cm long, 7–15 mm diam., woody, 26–34 -noded. Culm-internodes terete, thick-walled, 20–25 cm long, distally mealy. Lateral branches dendroid. Bud complement 12–20. Branch complement many, in an irregular line (2 rows), thinner than stem. Culm-sheaths present, tardily deciduous, 12–20 cm long, 3.5 times as long as wide, coriaceous, hispid, with dark brown hairs, without auricles, glabrous on shoulders. Culm-sheath ligule 1.5–4 mm high, dentate. Culm-sheath blade lanceolate, reflexed, 0.6–6 cm long, 1.5–2.5 mm wide, glabrous on surface. Leaves 3–5 per branch. Leaf-sheaths 2.7–5 cm long, glabrous on surface. Leaf-sheath oral hairs ciliate, dark. Leaf-sheath auricles falcate. Ligule an eciliate membrane, 1 mm long, brown, truncate. Leaf-blade base cuneate, with a brief petiole-like connection to sheath, petiole 0.1 cm long. Leaf-blades lanceolate, 5–11 cm long, 6–10 mm wide, fleshy. Leaf-blade venation with 4–6 secondary veins, without cross veins. Leaf-blade surface glabrous. Leaf-blade margins scabrous. Leaf-blade apex acuminate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. Tibet.

Drepanostachyum annulatum C.M.A. Stapleton. *Edinburgh J. Bot.*, 51(3): 305 (1994).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Bhutan. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Bhutan: Chhukha, Taktichhu, 27:02'N, 89:35'E, 74 km N of Phuntsholing, 1950 m, 30 Nov 1987, C.M.A. Stapleton 713 (HT: THIM).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (506, Fig. 5).

Derivation (Clifford & Bostock 2007): *L. annulus*, ring; -ata, possessing. Furnished with a ring, as with the thickened lower subtending glume forming a fleshy ring at the base of the spikelet.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose, clumped densely. Rhizomes short, pachymorph. Butt sheaths absent. Culms pendulous at the tip, 200–300 cm long, 4–6 mm diam., woody, without nodal roots. Culm-internodes terete, thin-walled, 10–21 cm long, dark green, distally pruinose. Culm-nodes swollen, pubescent. Lateral branches dendroid. Bud prophyll 1-keeled. Branch complement many, in a horizontal line (two lines). Culm-sheaths present, deciduous, 2 times as long as wide, green and purple, distinctly mottled with last colour, pubescent, hairy at the base, without auricles, ciliate on shoulders. Culm-sheath ligule entire or ciliolate. Culm-sheath blade linear. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate, 2 mm long. Ligule an eciliate membrane, 1–3 mm long, obtuse or acute. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath, petiole glabrous. Leaf-blades lanceolate, 8–16 cm long, 9–18 mm wide. Leaf-blade surface puberulous, hairy abaxially (on midrib).

Inflorescence. Inflorescence a panicle, without bracts or bracteate at branch bases. Panicle open. Panicle branches arcuate, pubescent in axils, with insignificant pulvini. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–8 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 lanceolate, laterally compressed, 8–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes pilose, hairy at tip.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4–7 mm long, chartaceous, without keels. Lower glume surface asperulous. Lower glume margins ciliate. Lower glume apex acute. Upper glume elliptic, 5–7.5 mm long, chartaceous, without keels. Upper glume surface scabrous. Upper glume margins ciliate. Upper glume apex acute.

Florets. Fertile lemma 7–9.5 mm long, chartaceous, without keel, more than 3-veined. Lemma surface scabrous. Lemma margins ciliolate, hairy above. Palea 8.5–10 mm long, 1.1–1.3 length of lemma, 2 -veined. Palea keels scabrous. Palea surface scabrous. Palea apex entire or dentate, 2 -fid. Rhachilla extension 2–5 mm long. Apical sterile florets distinct from fertile, 1 in number, rudimentary.

Flower and Fruit. Lodicules 3. Anthers 3, 4–5 mm long, yellow, anther tip apiculate. Caryopsis with adherent pericarp, apex unappendaged.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Eastern Himalaya.
Bhutan.

Drepanostachyum exauritum W.T. Lin. *J. Bamboo Res.*, 11(1): 30 (1992).

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).

TYPE from China. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Guangxi: Guilin, Z.M. Wu 58902 (*incomplete*) (HT: CANT).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *L. ex-*, without; *aurita*, eared. Leaf-blade without a pair of basal lobes.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, inclined at the tip, 300–400 cm long, 10–15 mm diam., woody. Culm-internodes terete, solid, 7–18.5 cm long, distally pubescent. Lateral branches dendroid. Bud complement 3. Branch complement several, in an irregular line. Culm-sheaths present, deciduous, coriaceous, hispid, with dark brown hairs, hairy on margins, without auricles, glabrous on shoulders. Culm-sheath ligule 5 mm high, lacerate. Culm-sheath blade lanceolate, spreading or reflexed. Leaves 5–6 per branch. Leaf-sheaths pubescent. Leaf-sheath oral hairs lacking. Ligule a ciliolate membrane, 1 mm long, pubescent on abaxial surface. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 10–17.5 cm long, 14–25 mm wide, fleshy. Leaf-blade venation with 12–14 secondary veins, with obscure cross veins. Leaf-blade surface

pubescent, hairy abaxially. Leaf-blade margins scaberulous. Leaf-blade apex attenuate. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

TDWG4. Guangxi.

Drepanostachyum falcatum (Nees) P.C. Keng. *J. Bamboo Res.*, 2(1): 16 (1983).

Accepted by: R.J.Soreng et al., *Catalogue of New World Grasses* (2000–2003) and online (as *Sinarundinaria*), W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Nepal. **Basionym or Replaced Name:** *Arundinaria falcata* Nees, *Linnaea* 9(4): 478 (1834)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *J.F. Royle s.n.*, Northwest India (K; ILT: US-2808851). LT designated by Chao & Renvoize, *Kew Bull.* 44: 358 (1989).

Recent Synonyms: *Sinarundinaria falcata* (Nees) C.S.Chao & S.A.Renvoize.

Illustrations (Books): L.B. Smith, D.C. Wasshausen, R.M. Klein *Flora Illustrada Catarinensis Gramineae* (1981–1982) (105, Fig. 46 as *Chimonombambusa falcata*).

Derivation (Clifford & Bostock 2007): *L. falx*, sickle; -ata, possessing. Inflorescence branches curved.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 200–350 cm long, 7–15 mm diam., woody. Culm-internodes terete, 15–30 cm long. Culm-nodes swollen. Lateral branches dendroid. Branch complement three or several, in an irregular line, with subequal branches. Culm-sheaths present, 1 length of internode. Culm-sheath ligule 6–12 mm high. Culm-sheath blade linear, reflexed, 1.2–5 cm long, acute. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.25 cm long. Leaf-blades deciduous at the ligule, lanceolate, 7.5–10 cm long, 5–8 mm wide. Leaf-blade surface scaberulous, rough adaxially, glabrous or pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle or composed of racemes, terminal and axillary. Panicle contracted, linear, 4–10 cm long. Primary panicle branches indistinct the panicle almost racemose. Racemes 1, single, 4–10 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 linear, laterally compressed, 12–18 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, 8 mm long, 0.8 length of upper glume, herbaceous, without keels, 3–5 -veined. Lower glume apex acuminate. Upper glume elliptic, 10 mm long, 0.75 length of adjacent fertile lemma, herbaceous, without keels, 7–9 -veined. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 12 mm long, herbaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface scabrous, pubescent, hairy above. Lemma apex acute, mucronate. Palea 1 length of lemma, 2 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ovate, membranous, ciliate. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 12 mm long, apex unappendaged. Hilum linear.

Distribution (TDWG). Continent. Tropical Asia, North America (+), South America (+).

Country /Province /State. Indian Subcontinent, Indo-China. Eastern Himalaya, India, Nepal, Pakistan, West Himalaya. Laos, Vietnam. **Caribbean, Western South America, Brazil.** Peru. Brazil West Central, Brazil Southeast, Brazil South.

TDWG4. Uttah Pradesh. Himachal Pradesh.

Drepanostachyum fractiflexum (T.P. Yi) D.Z.Li. *Fl. Yunnan* 9: 145 (2003).

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. **Basionym or Replaced Name:** *Fargesia fractiflexa* T.P. Li, *J. Bamboo Res.*, 4(1): 22 (1985). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: Miyi Xian, 1380–2600 m, 13 Dec. 1979, *T.P. Yi* 79239 (HT: SIFS).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 125).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 300–420 cm long, 6–13 mm diam., woody. Culm-internodes thick-walled, 15–30 cm

long, distally mealy. Lateral branches dendroid, ascending. Bud complement 1. Branch complement many, with subequal branches. Culm-sheaths present, 12–20 cm long, coriaceous, glabrous, without auricles, glabrous on shoulders. Culm-sheath ligule 1–4 mm high, entire to lacerate. Culm-sheath blade linear, reflexed, 2–5.5 cm long, 1.5–2 mm wide. Leaves 3–5 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule a ciliolate membrane, 1 mm long, pubescent on abaxial surface. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long. Leaf-blades lanceolate, 5–13 cm long, 5–12 mm wide, fleshy. Leaf-blade venation with 6–8 secondary veins, with obscure cross veins. Leaf-blade surface glabrous. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Sichuan.

Drepanostachyum intermedium (Munro) P.C. Keng. *J. Bamboo Res.*, 2(1): 18 (1983).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Sikkim. **Basionym or Replaced Name:** *Arundinaria intermedia* Munro, *Trans. Linn. Soc.* 26: 28 (1868). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Hab. Sikkim, alt. 7000–8000 ped. s. m., *Hooker. n.s.* (HT: K).

Recent Synonyms: *Sinarundinaria intermedia* (Munro) C.S.Chao & S.A.Renvoize, *Kew Bull.*, 44(2): 357 (1989). *Chimonobambusa intermedia* (Munro) Nakai, *Journ. Arnold Arb.* 6: 151 (1925).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (506, Fig. 5 & 508, Fig. 6).

Derivation (Clifford & Bostock 2007): *L. intermedia*. Having affinities with but distinct from other species.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 250–400 cm long, 10–12 mm diam., woody. Culm-internodes terete, thin-walled, 12–25 cm long, grey. Lateral branches dendroid. Branch complement many, with subequal branches. Culm-sheaths present, 20–25 cm long, 5–8 times as long as wide, chartaceous, glabrous, truncate at apex, ciliate on shoulders. Culm-sheath ligule 3–5 mm high. Culm-sheath blade linear, reflexed, 1.2–5 cm long. Leaf-sheaths striately veined, glabrous on surface or hispid. Leaf-sheath oral hairs setose, deciduous. Leaf-sheath auricles falcate. Ligule an eciliate membrane. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.2–0.3 cm long. Leaf-blades deciduous at the ligule, linear or lanceolate or oblong, 7.5–20 cm long, 12–25 mm wide, light green, glandular. Leaf-blade midrib conspicuous. Leaf-blade venation with 6–14 secondary veins, with obscure cross veins. Leaf-blade surface scabrous, rough adaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence a panicle, terminal and axillary, bracteate at branch bases, subtended by bracts. Panicle open. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 3–5 fertile florets, with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes compressed, clavate, pilose, hairy above.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, without keels, 3–5 -veined. Lower glume surface pilose, hairy at apex. Lower glume apex obtuse or acute. Upper glume elliptic, without keels, 7–9 -veined. Upper glume surface pilose, hairy at apex. Upper glume apex obtuse or acute.

Florets. Fertile lemma ovate, 7–9 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface smooth or scaberulous. Lemma apex acute, mucronate. Palea 6 -veined. Palea keels ciliolate. Palea apex with excurrent keel veins. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, veined, ciliate. Anthers 3, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 12 mm long, apex unappendaged. Hilum linear.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, **Malesia.** Assam, Eastern Himalaya, Nepal. Java.

TDWG4. Arunachal Pradesh, Darjeeling, Bhutan. Meghalaya, Nagaland. Uttah Pradesh. Himachal Pradesh.

Drepanostachyum khasianum (Munro) P.C. Keng. *J. Bamboo Res.*, 2(1): 18 (1983).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from India. **Basionym or Replaced Name:** *Arundinaria khasiana* Munro, *Trans. Linn. Soc. London* 26(1): 28 (1868)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *W. Griffith 1058, K.D. 6741*, India: Khasia, Chillong [Shillong] Wood, 5800 ft (K; ILT: US-1064618). LT designated by Stapleton, *Edinb. J. Bot.* 51: 308 (1994).

Recent Synonyms: *Arundinaria suberecta* Munro, *Trans. Linn. Soc.* 26: 32 (1868).

Illustrations (Books): H.J.Noltie, *The Grasses of Bhutan* (2000) (506, Fig. 5 & 508, Fig. 6).

Derivation (Clifford & Bostock 2007): L. -ana, indicating location. From the Khasia Hills, India.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, 250–400 cm long, 12 mm diam., woody. Culm-internodes terete, 15–20 cm long, dark green or black, smooth. Lateral branches dendroid. Branch complement many, with subequal branches. Culm-sheaths present, 15–23 cm long, 4–5 times as long as wide, chartaceous, smooth, concave at apex. Culm-sheath ligule 5–7 mm high, dentate. Culm-sheath blade linear, reflexed, 2.5 cm long. Leaf-sheaths striately veined. Ligule an eciliate membrane, obtuse or acute. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, linear or lanceolate, 7–10 cm long, 7–8 mm wide, glandular. Leaf-blade midrib conspicuous. Leaf-blade venation with 4–6 secondary veins, without cross veins. Leaf-blade surface smooth, glabrous or pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Synflorescence on a separate leafless culm.

Inflorescence a panicle, terminal and axillary, subtended by bracts. Panicle open. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 10–12 fertile florets, with a barren rhachilla extension or with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, laterally compressed, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, pubescent, hairy above.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, without keels, 3 -veined. Lower glume margins ciliate. Lower glume apex acuminate, mucronate. Upper glume elliptic, without keels, 5–7 -veined. Upper glume surface pilose. Upper glume apex acuminate, mucronate.

Florets. Fertile lemma ovate, 8 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma surface smooth or scabrous. Lemma apex acute, mucronate. Palea 4 -veined. Palea apex ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, veined, ciliate. Anthers 3, anther tip smooth. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 12 mm long, apex unappendaged. Hilum linear.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, Eastern Himalaya. Myanmar.

TDWG4. Bhutan. Assam, Meghalaya.

Drepanostachyum kurzii (Gamble) Pandey ex D.N.Tewari. *Monogr. Bamboo:* 90 (1993).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Myanmar. **Basionym or Replaced Name:** *Arundinaria kurzii* Gamble, *Ann. Roy. Bot. Gard. (Calcutta)* 7: 25, t. 25 (1896)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Coasts of Southern Burma, *Kurz s.n.* (HT: K).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): In honor of Wilhelm Sulpiz Kurz (1834–1878) German botanist.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 12 mm diam., woody. Culm-internodes terete, thin-walled, 18 cm long, yellow, striate, smooth. Culm-nodes swollen. Lateral branches dendroid. Branch complement many, in a clump. Culm-sheaths present. Leaves 2–6 per branch. Leaf-sheaths striately veined, glabrous on surface. Leaf-sheath oral hairs scanty. Ligule a ciliolate membrane. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades linear or lanceolate, 8 cm long, 5 mm wide, fleshy. Leaf-blade midrib prominent beneath. Leaf-blade venation with 6

secondary veins, with obscure cross veins. Leaf-blade surface pilose, sparsely hairy, hairy abaxially. Leaf-blade margins smooth. Leaf-blade apex acute. Flowering specimens unknown.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Myanmar.

Drepanostachyum membranaceum (T.P.Yi) D.Z.Li. *Novon* 15:600 (2005).

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. **Basionym or Replaced Name:** *Fargesia membranacea* T.P. Yi, *Acta Bot. Yunnanica*, 14(2): 135 (1992). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Sichuan: Mian'ning Xian, 2360 m, 6 Nov. 1990, T.P. Yi 90172 (HT: SIFS).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China South Central.

TDWG4. Sichuan.

Drepanostachyum naibunense W.T. Lin & Z.M. Wu. *J. South China Agr. Univ.* 13(2): 84. 1992.

Not on *GrassBase*.

Accepted by: U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Guangdong: Guangning, Nanjie, 14 Sept. 1990, Z.M. Wu 88029 (HT: SCAC).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

TDWG4. Guangdong.

Drepanostachyum polystachyum (Kurz ex Gamble) R.B. Majumdar. *S. Karthikeyan et al., Fl. Ind. Enumerat. - Monocot.*: 277 (1989).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online, U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from India. **Basionym or Replaced Name:** *Arundinaria polystachya* Kurz ex Gamble, *Ann. Roy. Bot. Gard. (Calcutta)* 7: 7, t. 5 (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: LT: *Kurz & Anderson s.n.*, India: Sikkim (K). LT designated by Chao & Renvoize, *Kew Bull* 44: 359 (1989).

Recent Synonyms: *Sinarundinaria polystachya* (Gamble) C.S.Chao & S.A.Renvoize, *Kew Bull.*, 44(2): 359 (1989).

Illustrations (Books): No illustration found (BKS).

Derivation (Clifford & Bostock 2007): *G. polys*, many; *stachys*, ear of corn. Plants with many branched culms or inflorescences.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms erect, woody. Lateral branches dendroid. Branch complement with subequal branches. Culm-sheaths present. Leaf-sheaths striately veined, glabrous on surface. Ligule an eciliate membrane, obtuse. Leaf-blade base with a brief petiole-like connection to sheath. Leaf-blades deciduous at the ligule, lanceolate, 15–20 cm long, 17–25 mm wide, glandular. Leaf-blade midrib conspicuous. Leaf-blade venation with 10 secondary veins, without cross veins. Leaf-blade surface scabrous, rough adaxially or on both sides, glabrous or pubescent, hairy abaxially. Leaf-blade margins scabrous. Leaf-blade apex attenuate, filiform.

Inflorescence. Inflorescence a panicle, terminal and axillary. Panicle open, lanceolate. Primary panicle branches indistinct the panicle almost racemose. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 4–6 fertile florets, with diminished florets at the apex. Spikelets of 1 fertile floret with or without additional sterile florets, or of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets ovate, laterally compressed, 12–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes clavate, pilose.

Glumes. Glumes persistent, similar, shorter than spikelet, similar to fertile lemma in texture. Lower glume ovate, 5–7 mm long, 1-keeled, 5–7 -veined. Lower glume surface pilose. Lower glume apex acuminate. Upper

glume elliptic, 5–7 mm long, 1-keeled, 5–7 -veined. Upper glume surface pilose, hairy at apex. Upper glume apex acuminate.

Florets. Fertile lemma ovate, 10–12 mm long, chartaceous, without keel, 7–9 -veined, more than 3-veined. Lemma margins ciliate. Lemma apex acuminate, mucronate. Palea 5 -veined. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, veined, ciliate. Anthers 3, anther tip apiculate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 12 mm long, apex unappendaged. Hilum linear.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent. Assam, Eastern Himalaya.

TDWG4. Darjeeling. Uttah Pradesh.

Drepanostachyum semiorbiculatum (T.P.Yi) Stapleton. *Novon* 15:600 (2005).

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. **Basionym or Replaced Name:** *Fargesia semiorbiculata* T.P. Yi, *J. Bamboo Res.*, 2(2): 40 (1983). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: China: Xizang: Cona Xian, 2400–2500 m, 7 Jan. 1978, *C.G. Jiang s.n.* (HT: SIFS).

Illustrations (Books): S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 126).

Derivation (Clifford & Bostock 2007): *L. semi*, half; *orbiculus*, circular; *-atum*, possessing. Possibly a reference to the club-shaped rhizomes.

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo, caespitose. Rhizomes short, pachymorph. Butt sheaths absent. Culms 300–420 cm long, 6–13 mm diam., woody. Culm-internodes thick-walled, 15–30 cm long, distally mealy. Lateral branches dendroid, ascending. Bud complement 1. Branch complement many, with subequal branches. Culm-sheaths present, 12–20 cm long, coriaceous, glabrous, without auricles, glabrous on shoulders. Culm-sheath ligule 1–4 mm high, ciliate. Culm-sheath blade linear, reflexed, 2–5.5 cm long, 1.5–2 mm wide. Leaves 2–5 per branch. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule a ciliate membrane, 1 mm long, pubescent on abaxial surface. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1 cm long. Leaf-blades lanceolate, 2–10 cm long, 4–5 mm wide, fleshy. Leaf-blade venation with 4–6 secondary veins, with obscure cross veins. Leaf-blade surface glabrous. Flowering specimens unknown.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. Tibet.

Drepanostachyum stoloniforme S.-he Chen & Zhen-Z. Wang. *Acta Phytotax. Sin.* 45(3): 308–310, f. 1 (2007).

TYPE from China. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Fujian: Xiamen, Xiamen Botanical Garden, 110–200 m, 18 Feb. 2004, *S.H. Chen 2004-002* (HT: PE; IT: XMBG).

Illustrations (Books): No illustration found (BKS).

Classification. Subfamily Bambusoideae. Tribe: Bambuseae.

Habit, Vegetative Morphology. Perennial, woody bamboo. Rhizomes elongated, leptomorph. Butt sheaths absent. Culms erect, 300–500 cm long, 3–6 mm diam., woody, 25–55 -noded. Culm-internodes terete, thin-walled, 13–18 cm long. Culm-nodes swollen. Lateral branches dendroid. Branch complement several, in a clump. Culm-sheaths present, chartaceous, brown, smooth, glabrous, without auricles. Culm-sheath ligule 0.5 mm high, ciliate. Culm-sheath blade linear or lanceolate, reflexed, glabrous on surface, acuminate. Leaves 3–10 per branch. Leaf-sheaths 2–6 cm long, glabrous on surface. Leaf-sheath auricles absent. Ligule a ciliate membrane, 3 mm long. Leaf-blade base with a brief petiole-like connection to sheath, petiole 0.1–0.2 cm long. Leaf-blades lanceolate, 2–6 cm long, 3–6 mm wide, fleshy. Leaf-blade venation with 6–8 secondary veins, with obscure cross veins. Leaf-blade surface glabrous. Leaf-blade margins scaberulous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence composed of racemes, subtended by bracts. Racemes 1, paired. Fertile spikelets pedicelled. Pedicels present, 15–19 mm long.

Fertile Spikelets. Spikelets comprising 3–4 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 12–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes 1–2 mm long.

Glumes. Glumes persistent, similar, shorter than spikelet. Lower glume lanceolate, 4–6 mm long, 1 length of upper glume, without keels, 3–5 -veined. Upper glume lanceolate, 4–6 mm long, 0.5–0.6 length of adjacent fertile lemma, without keels, 4–5 -veined.

Florets. Fertile lemma lanceolate, 7–11 mm long, without keel, 7–9 -veined, more than 3-veined. Lemma surface glabrous. Lemma apex acuminate. Palea 8–9 mm long. Palea apex dentate, 2 -fid. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 3, ciliate. Anthers 3, 4–5 mm long. Stigmas 3. Caryopsis oblong, 10–12 mm long, light brown, acute.

Distribution (TDWG). Continent. Temperate Asia.

Country /Province /State. China. China Southeast.

Fujian.

Dryopoa dives (F. Muell.) Vickery. *Contrib. N. S. Wales Nat. Herb.* 3: 196 (1963).

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:** *Festuca dives* F. Muell., *Fragm.* 3: 147 (1863). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Australia: In colibus silvaticus inter flumina Tarwan et Bunyip Creek, *Mueller s.n.* (IT: K).

Illustrations (Books): N.Walsh & T.Entwistle, *Flora of Victoria* Vol 2 (1994) (402, Fig 80), S.W.L.Jacobs, R.D.B.Whalley & D.J.B.Wheeler., *Grasses of New South Wales*, 4th edn (2008) (224), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (298, Fig. 40), 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. plentiful. Common grasses.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 150–300 cm long, 3–10 mm diam., 5 -noded. Culm-nodes glabrous. Ligule an eciliate membrane, 8–20 mm long, lacerate. Leaf-blades 10–50 cm long, 7–18 mm wide. Leaf-blade surface scabrous, rough on both sides. Leaf-blade margins scabrous. Leaf-blade apex acuminate.

Inflorescence. Inflorescence a panicle. Panicle open, pyramidal, 20–50 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, filiform, scabrous.

Fertile Spikelets. Spikelets comprising 3–7 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 9 mm long, breaking up at maturity, disarticulating below each fertile floret.

Glumes. Glumes persistent, dissimilar, shorter than spikelet, thinner than fertile lemma. Lower glume lanceolate, 3–3.5 mm long, 0.5–0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein scabrous. Lower glume lateral veins absent. Lower glume apex acute. Upper glume oblong, 4–7 mm long, 1–1.3 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume primary vein scabrous. Upper glume surface scabrous, rough on veins. Upper glume apex acute.

Florets. Fertile lemma oblong, 4–5.5 mm long, chartaceous, keeled, 5 -veined, more than 3-veined. Lemma lateral veins prominent. Lemma surface scabrous. Lemma apex erose, truncate. Palea 1 length of lemma, 2 -veined. Palea keels ciliate. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 3 mm long. Ovary pubescent on apex. Caryopsis with adherent pericarp, oblong. Hilum linear, 0.33 length of caryopsis.

Distribution (TDWG). Continent. Australasia.

Country /Province /State. Australia. New South Wales, Victoria, Tasmania.

TDWG4. Coast, Tablelands.

xDupoa labradorica (Steud.) J. Cayouette & S.J. Darbyshire. *Nordic J. Bot.*, 13(6): 616 (1993).

Accepted by: W.D.Clayton & K.Harman, *GrassBase* (2008) and online (as *Poa*).

TYPE from Canada. **Basionym or Replaced Name:** *Poa labradorica* Steud., *Syn. Pl. Glumac.* 1: 252 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: C. G. Albrecht s.n., [1846–1848], Canada: Labrador, Mission [Hopedale] (P-STEUD; IT: US (fragm. ex P-STEUD)).

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (603).

Derivation (Clifford & Bostock 2007): L. -ica, belonging to. From Labrador, Canada.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial, culms solitary. Rhizomes elongated. Culms erect, 15–40 cm long, 2.5–4 mm diam. Lateral branches lacking. Leaves mostly basal. Leaf-sheaths 1.5–4 cm long, keeled.

Ligule an eciliate membrane, 2.5 mm long, truncate. Leaf-blades conduplicate or convolute, 5–15 cm long, 3–6 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear or lanceolate, 6–12 cm long, 0.7–2 cm wide. Primary panicle branches ascending, bearing spikelets almost to the base. Panicle branches stiff, glabrous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets elliptic, laterally compressed, 5.5–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes smooth, glabrous. Floret callus glabrous.

Glumes. Glumes persistent, similar, shorter than spikelet, firmer than fertile lemma. Lower glume ovate, 4.5–5.5 mm long, 0.66–0.75 length of upper glume, cartilaginous, much thinner above, much thinner on margins, 1-keeled, 3 -veined. Lower glume apex acuminate. Upper glume ovate, 5–7.5 mm long, 1.25–1.5 length of adjacent fertile lemma, cartilaginous, much thinner above, with hyaline margins, 1-keeled, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, 4–5 mm long, membranous, much thinner above, keeled, 5–7 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma apex erose, acute. Palea 1 length of lemma. Palea keels scabrous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules 2, membranous. Anthers 3, 2 mm long. Caryopsis with adherent pericarp. Hilum punctiform.

Distribution (TDWG). Continent. North America.

Country /Province /State. Eastern Canada. Labrador, Quebec.

Dupontia fisheri R. Br. *Parry, Voy. App.* 191 (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), T.G.Tutin et al, *Flora Europaea* 5 (1980) (& as *D.psilosantha*), N.Tsvelev, *Grasses of the Soviet Union* (1983).

TYPE from Melville Island. **Basionym or Replaced Name:** *Dupontia psilosantha* (Rupr.) Griseb., Ledeb., *Fl. Ross.* 4:386 (1852). T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: ST: *A. Fisher* 63, 1820, Arctic America, Melville Isl., Winter Harbor (BM; IT: BM, GH (photo US), LE, US-865897 (fragm. ex BM)). LT: "63 *Dupontia fisheri* Fl. Mel. Melville Isl. Fisher 1820..

Illustrations (Books): M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (603).

Derivation (Clifford & Bostock 2007): in honor of Alexander Fischer (fl. 1820s) British naval surgeon.

Classification. Subfamily Pooideae. Tribe: Poeae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms erect, 10–25 cm long. Ligule an eciliate membrane. Leaf-blades 3–13 cm long, 1–4 mm wide.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 3–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 2–3 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong, laterally compressed, 4–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite. Floret callus pilose.

Glumes. Glumes persistent, similar, reaching apex of florets. Lower glume ovate, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex acute. Upper glume ovate, 1–1.1 length of adjacent fertile lemma, membranous, 1-keeled, 3 -veined. Upper glume apex acute.

Florets. Fertile lemma elliptic, 4–6 mm long, membranous, much thinner above, purple, keeled, lightly keeled, 3–5 -veined, 0–3 -veined or more than 3-veined. Lemma lateral veins obscure, less than two thirds length of lemma. Lemma apex obtuse or cuspidate. Palea 1 length of lemma, 2 -veined. Palea keels smooth. Rhachilla extension 0.33–0.5 length of fertile floret.

Flower and Fruit. Anthers 3, 2 mm long, purple. Caryopsis with adherent pericarp. Hilum elliptic.

$2n = 88$ (1 ref TROPICOS).

Distribution (TDWG). Continent. Europe, Temperate Asia, North America.

Region. Northern Europe, Eastern Europe.

Country /Province /State. : Svalbard. North European Russia. Siberia, Russian far east. Krasnoyarsk. Kamchatka. **Subarctic America, Western Canada, Eastern Canada.** Aleutian Is, Alaska, Greenland, Northwest Territories, Yukon. Alberta, Manitoba, Saskatchewan. Labrador, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward I, Quebec.

TDWG4.

Duthiea brachypodiim (P. Candargy) Keng & P. C. Keng. *Acta Phytotax. Sin.* 10: 182 (1965).

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), N.L.Bor, *Grasses of Burma, Ceylon, India and Pakistan* (1960) (as *D. nepalensis*).

TYPE from China. **Basionym or Replaced Name:** *Triavenopsis brachypodium* P. Candargy, *Arch. Biol. Veg. Pure Appl.* 1: 64–65 (1901)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: China: Sichuan: Tongolo, 1891, *R.P. Soulii* 337 (HT: ?).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (436, Fig 46 as *D. nepalensis*), H.J.Noltie, *The Grasses of Bhutan* (2000) (583, Fig. 22), S-L Chen et al, *Flora of China*, Illustrations, Poaceae (2007) (Fig. 631).

Derivation (Clifford & Bostock 2007): Gk *brachys*, short; *podion*, little foot. Spikelets borne on very short pedicels.

Classification. Subfamily Pooideae. Tribe: Phaenospemateae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with compacted dead sheaths. Culms erect, 30–60 cm long. Ligule an eciliate membrane, 5 mm long. Leaf-blades involute, 6–16 cm long, 2.5–3 mm wide. Leaf-blade surface ribbed, scabrous, glabrous. Leaf-blade apex attenuate, hardened.

Inflorescence. Inflorescence composed of racemes, embraced at base by subtending leaf. Peduncle antrorsely scabrous above. Racemes 1, single, erect, unilateral, 7 cm long, bearing few fertile spikelets, bearing 8–11 fertile spikelets on each. Rhachis subterete, scabrous on surface. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–4 mm long, scabrous.

Sterile Spikelets. Basal sterile spikelets represented by a single scale, 1 in number, 2–6 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 linear, subterete, 15–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, obtuse, disarticulating obliquely.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, parallel to lemmas. Lower glume elliptic, 1 length of upper glume, herbaceous, 1-keeled, 9 -veined. Lower glume surface asperulous. Lower glume apex acute. Upper glume elliptic, 1 length of adjacent fertile lemma, herbaceous, with hyaline margins, 1-keeled, 8–9 -veined. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma elliptic, 15–16 mm long, membranous, much thinner on margins, without keel, 9 -veined, more than 3-veined. Lemma surface scaberulous, glabrous, with a transverse fringe of hair. Lemma apex lobed, 2 -fid, incised 0.5 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 22 mm long overall, with twisted column. Palea 2 -veined. Palea keels scabrous. Palea surface glabrous. Palea apex with excurrent keel veins.

Flower and Fruit. Lodicules absent. Anthers 3. Stigmas 2, terminally exerted, papillose. Styles 5 mm long, connate below, 1 of their length connate.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. China. China South Central, Qinghai, Tibet. **Indian Subcontinent.** Eastern Himalaya, Nepal.

TDWG4. Sichuan, Yunnan. Bhutan.

Duthiea bromoides Hack. *Verh. Zool.-Bot. Ges. Wien*, 45: 200 (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 Pakistan. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: Pakistan, Kashmir: Duthie 13155 (K iso) ; Pakistan, Swat: Stewart 25362.

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (436, Fig 46), T.A.Cope, *Flora of Pakistan* 143: *Poaceae* (1982).

Derivation (Clifford & Bostock 2007): Gk. -oides, resembling. Resembling *Bromus*, usually with respect to the inflorescence.

Classification. Subfamily Pooideae. Tribe: Phaenospemateae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–80 cm long. Ligule an eciliate membrane, 6 mm long. Leaf-blades involute, 5–35 cm long, 2.5–3 mm wide. Leaf-blade surface ribbed, scabrous, glabrous. Leaf-blade apex attenuate, hardened.

Inflorescence. Inflorescence composed of racemes. Peduncle antrorsely scabrous above. Racemes 1, single, drooping, unilateral, 2.5–4 cm long, bearing few fertile spikelets, bearing 2–9 fertile spikelets on each. Rhachis

subterete, scabrous on surface. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–5 mm long, scabrous.

Sterile Spikelets. Basal sterile spikelets represented by a single scale, 1 in number, 2–5 mm long.

Fertile Spikelets. Spikelets comprising 4–5 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets oblong or cuneate, laterally compressed, 10–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, clavate, obscured by lemmas, pilose. Floret callus evident, pubescent, obtuse, disarticulating obliquely.

Glumes. Glumes persistent, similar, reaching apex of florets, similar to fertile lemma in texture, gaping. Lower glume elliptic, 0.9–1 length of upper glume, herbaceous, 1-keeled, 5–6 -veined. Lower glume surface asperulous. Lower glume apex acute. Upper glume elliptic, 1.1 length of adjacent fertile lemma, herbaceous, with hyaline margins, 1-keeled, 7–10 -veined. Upper glume surface asperulous. Upper glume apex acute.

Florets. Fertile lemma oblong, 14 mm long, membranous, much thinner on margins, without keel, 10–11 -veined, more than 3-veined. Lemma surface scaberulous, villous, hairy below. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 12–15 mm long overall, with twisted column. Palea 2 -veined. Palea keels scabrous. Palea surface pilose. Palea apex with excurrent keel veins. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules absent. Anthers 3. Stigmas 2, terminally exserted, papillose. Styles 5 mm long, connate below, 1 of their length connate.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. Western Asia. Iran. **Indian Subcontinent.** Pakistan, West Himalaya.

TDWG4. Himachal Pradesh, Jammu Kashmir.

Duthiea oligostachya (Munro ex Aitch.) Stapf. *Hook. Ic. Pl. 25 sub t. 2474* (1896).

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 Afganistan. **Basionym or Replaced Name:** *Avena oligostachya* Munro, *J. Linn. Soc., Bot.* 18: 108 (1880)

. T:<Type of Basionym>: *vide* TROPICOS and Kew Synonymy Database: T: *J.E.T. Aitchison 367*, Dec 1879, Afganistan: Kurrum Valley (LE).

CT: *J.E.T. Aitchison 177*, 25 Jun 1880, [Afganistan]: Dist. Kuram: elev. 6500–10000' (LE). Plants collected by J.E.T. Aitchison..

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (436, Fig 46).

Derivation (Clifford & Bostock 2007): Gk. *oligos*, few; *stachys*, spike as of an ear of wheat. Inflorescence with few branches.

Classification. Subfamily Pooideae. Tribe: Phaenospermateae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths persistent and investing base of culm, with fibrous dead sheaths. Culms erect, 15–30 cm long. Ligule an eciliate membrane, 10–12 mm long. Leaf-blades involute, 6–12 cm long, 2 mm wide. Leaf-blade surface ribbed, scabrous, pubescent. Leaf-blade apex attenuate, hardened.

Inflorescence. Inflorescence composed of racemes. Peduncle smooth. Racemes 1, single, drooping, unilateral, 3–4 cm long, bearing few fertile spikelets, bearing 3–4 fertile spikelets on each. Rhachis subterete, smooth on surface. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2.5–3 mm long, smooth.

Sterile Spikelets. Basal sterile spikelets represented by a single scale, 1 in number, 4–12 mm long.

Fertile Spikelets. Spikelets comprising 2 fertile florets, with diminished florets at the apex. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate or cuneate, laterally compressed, 16–18 mm long, breaking up at maturity, disarticulating below each fertile floret. Rhachilla internodes definite, clavate, obscured by lemmas, pilose. Floret callus evident, bearded, obtuse, disarticulating obliquely. Floret callus hairs 0.5 length of lemma.

Glumes. Glumes persistent, similar, exceeding apex of florets, similar to fertile lemma in texture, gaping. Lower glume elliptic, 1 length of upper glume, herbaceous, 1-keeled, 5 -veined. Lower glume surface smooth. Lower glume apex acute. Upper glume elliptic, 1.1 length of adjacent fertile lemma, herbaceous, with hyaline margins, 1-keeled, 6 -veined. Upper glume surface smooth. Upper glume apex acute.

Florets. Fertile lemma oblong, 14–15 mm long, membranous, much thinner on margins, without keel, 7 -veined, more than 3-veined. Lemma surface smooth, villous, hairy below. Lemma apex lobed, 2 -fid, incised 0.2 of lemma length, awned, 1 -awned. Principal lemma awn from a sinus, geniculate, 35 mm long overall, with twisted column. Palea 2 -veined. Palea keels scabrous. Palea surface pilose. Palea apex mucous. Apical sterile florets resembling fertile though underdeveloped.

Flower and Fruit. Lodicules absent. Anthers 3. Stigmas 2, terminally exerted, papillose. Styles 5 mm long, connate below, 1 of their length connate.

Distribution (TDWG). Continent. Temperate Asia, Tropical Asia.

Country /Province /State. Western Asia. Iran. **Indian Subcontinent.** Pakistan.