

Jansenella griffithiana (Müll. Stuttg.) Bor. *Kew Bull.* 10: 98 (1955).

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 griffithiana* Müll. Stuttg., *Bot. Zeitung (Berlin)* 14(20): 347 (1856)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Griffith 36*, Kasiya (B).

Illustrations (Books): N.L.Bor, *The grasses of Burma, Ceylon, India and Pakistan* (1960) (427, Fig 45), G.G.Potgar, C.B.Salunkhe & S.R.Yadav, *Grasses of Maharashtra* (2012) (Fig. 214).

Images: G.G.Potgar, C.B.Salunkhe & S.R.Yadav, *Grasses of Maharashtra* (2012) (Pl. 22).

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of William Griffith (1810–1845), English-born surgeon-botanist in India and southeast Asia.

Classification. Subfamily Panicoideae. Tribe: Tristachyideae.

Habit, Vegetative Morphology. Annual, mat forming. Culms decumbent, 15–30 cm long, rooting from lower nodes. Ligule an eciliate membrane. Leaf-blade base amplexicaul. Leaf-blades lanceolate, 1–6 cm long, 2–14 mm wide, firm or flaccid.

Inflorescence. Inflorescence a panicle. Panicle open, ovate, dense, 1–5 cm long. Panicle branches flat, scabrous, pilose. 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, laterally compressed, 5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus pilose, obtuse.

Glumes. Glumes persistent, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume ovate, 3–4 mm long, 0.5–0.6 length of upper glume, membranous, mid-green or purple, without keels, 3 -veined. Lower glume surface glabrous or pilose. Lower glume apex acute, awned, 1 -awned, awn 1 mm long. Upper glume oblong, 5–7 mm long, 1 length of adjacent fertile lemma, membranous, mid-green or purple, without keels, 5 -veined. Upper glume surface scabrous, rough on veins, glabrous or pilose, with tubercle-based hairs. Upper glume apex acute, awned, awn 1–2 mm long.

Florets. Basal sterile florets 1, male or barren, with palea, persisting on inflorescence. Lemma of lower sterile floret similar to upper glume, oblong, 5–7 mm long, 1 length of fertile lemma, membranous, 3–5 -veined, obtuse, awned. Awn of lower sterile floret 1–2 mm long. Palea of lower sterile floret winged on keels (narrowly). Fertile lemma oblong, 4–6 mm long, chartaceous to coriaceous, without keel, 3 -veined, 0–3 -veined. Lemma surface glabrous or pilose, 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, with triangular lobes, incised 0.3–0.4 of lemma length, awned, 3 -awned. Principal lemma awn from a sinus, geniculate, flat below, 10–15 mm long overall, with twisted column. Column of lemma awn 5 mm long. Lateral lemma awns present, arising on apex of lobes, 1–2 mm long, shorter than principal. Palea lanceolate, 2 -veined. Palea keels winged, narrowly winged. Palea surface pubescent, with turgid hairs. Palea apex dentate, 2 -fid.

Flower and Fruit. Lodicules 2, cuneate, fleshy. Anthers 3, 0.75–1.75 mm long. Stigmas 2. Caryopsis with adherent pericarp, oblong, dorsally compressed, plano-convex, 1.4–1.5 mm long. Embryo 0.5 length of caryopsis. Hilum punctiform.

Distribution (TDWG). Continent. Tropical Asia.

Country /Province /State. Indian Subcontinent, Indo-China. Assam, India, Sri Lanka. Myanmar. Assam. Kerala. Maharashtra, Tamilnadu.

Jansenella neglecta S.R. Yadav, Chivalkar & Gosavi. *Rheedera* 20:1.38–43 (2010).

Images: G.G.Potgar, C.B.Salunkhe & S.R.Yadav, *Grasses of Maharashtra* (2012) (Pl. 22).

Jarava academica (Hicken) Penail. *Contr. U. S. Natl. Herb.* 48: 403 (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 *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa academica* Hicken, *Darwiniana* 1: 167 (1924). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *P.G. Lorentz 45*, no date, Argentina: Csrdoaba (US-866128 (fragm. ex B)).

Recent Synonyms: *Stipa cordobensis* Mez, non Speg.(1901), Fedde, *Repert.* 17: 208 (1921).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ica*, belonging to; Akademia, a school in the suburb of Athens in Classical Times. Found growing in the vicinity of the University City of Cordoba, Argentina.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 20–40 cm long. Culm-internodes smooth, distally glabrous. Lateral branches lacking. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane. Leaf-blades filiform, 0.5–1 mm wide.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, dense, 7–15 cm long, bearing few spikelets. Primary panicle branches appressed, 3–4 cm long, bearing spikelets almost to the base. Panicle branches scabrous, bearded in axils. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 4–8 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, subterete, 7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7.5 mm long, 1.1 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume primary vein ciliate. Lower glume lateral veins absent. Lower glume surface puberulous. Lower glume apex acuminate. Upper glume lanceolate, 7 mm long, membranous, 1-keeled, 3 -veined. Upper glume primary vein ciliate. Upper glume surface puberulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn straight, 4 mm long overall.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

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

Jarava ambigua (Speg.) Penail. *Gayana, Bot.* 59(1): 30 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa ambigua* Speg., *Rev. Argent. Bot.* 1: 27 [Apr.] (1925). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Buenos Aires, Estacion Iriarte: Spegazzini (LP holo, BAA, US).

Illustrations (Books): A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, Gramineas (1969) (145, Fig 47 as *Stipa*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (as *Stipa*), M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (*Fl. Pat.* 3: 314, Fig. 207 (1978) as *Stipa*).

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

Derivation (Clifford & Bostock 2007): L. uncertain. Species that may be readily confused with others or do not necessarily belong in the genus in which they have been placed or are intermediate in characters between other genera.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 50–100 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-

sheath oral hairs ciliate. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades filiform, convolute, 20–45 cm long, 0.6 mm wide. Leaf-blade surface glabrous. Leaf-blade margins ciliate. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle open, 20–45 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 0.5–1 mm long, pilose, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–10 mm long, 1 length of upper glume, hyaline, yellow or purple, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 6–10 mm long, 1.5–2 length of adjacent fertile lemma, hyaline, yellow or purple, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 4–5.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 2–4 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 25–30 mm long overall, with 14–24 mm long limb, with twisted column, deciduous. Column of lemma awn 3–7 mm long, glabrous. Palea 3–4 mm long, chartaceous, 2 -veined, without keels. Palea surface pilose (1–2mm), hairy on back.

Flower and Fruit. Lodicules 3. Anthers 3, 1.5–2.5 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2.5–3.5 mm long, dark brown. Hilum linear, 0.66–0.75 length of caryopsis.

Cleistogenes present, in lower sheaths.

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

Region. Northern Europe (*).

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

San Luis. Buenos Aires, Cordoba, Entre Rios, La Pampa. Chubut, Neuquén, Río Negro, Santa Cruz.

Jarava annua (Mez) Penail. Gayana, *Bot.* 59(1): 30 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Peru. **Basionym or Replaced Name:** *Stipa annua* Mez, Fedde, *Repert.* 17: 204 (1921). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru, Chosica: Weberbauer 5353 (B holo, US).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. annual.* Annuals.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Annual, caespitose. Culms erect, 10–20 cm long, 2 -noded. Ligule an eciliate membrane, 0.2 mm long. Leaf-blades flat or convolute, 2–5 cm long, 0.5–1.5 mm wide. Leaf-blade surface ribbed, puberulous, hairy abaxially.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 4–8 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–5 mm long, pubescent, hairy above.

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

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

Florets. Fertile lemma lanceolate, subterete, 5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea.

Lemma apex surmounted by a ring of hairs, with this appendage 0.5–1.5 mm long, awned, 1 -awned. Principal lemma awn geniculate, 20–30 mm long overall, with twisted column. Column of lemma awn 10–15 mm long, pubescent. Palea 1.5 mm long, 2 -veined, without keels.

Flower and Fruit. Lodicules 2. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2 mm long. Hilum linear, 0.75 length of caryopsis.

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

Country /Province /State. **Western South America, Southern South America.** Peru. Chile North. Tarapaca, Antofagasta.

Jarava brachychaeta (Godr.) Penailillo. *Gayana*, Bot. 59: 30 (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 (as *Stipa*), D.Sharp, D. & B.K.Simon, *AusGrass* (2002) (as *Achnatherum*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006) (as *Achnatherum*).

TYPE from France. **Basionym or Replaced Name:** *Stipa brachychaeta* Godr., *Mem. Sect. Sci. Acad. Sci. Montpellier* 1: 450 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: HT: *Anon.*, 22 May 1848, France: du Port Juvenal Cultivi au Jardin Botanique (MPU (fragm.); OM: BAA-2979, hojas a & b (fragm.) de un probable ejemplar tipo). HT (probable).

Recent Synonyms: *Achnatherum brachychaetum* (Godr.) Barkworth, *Phytologia*, 74(1): 6 (1993).

Illustrations (Books): D.Sharp & B.K.Simon, *AusGrass*. Grasses of Australia. CD-Rom Version 1.0. (2002) (as *Achnatherum*), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (as *Achnatherum*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (as *Achnatherum*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (as *Stipa*).

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

Derivation (Clifford & Bostock 2007): Gk *brachys*, short; *chaete*, bristle. Awn of lemma shorter than that of related species.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–90 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.2–0.5 mm long, pilose on abaxial surface, truncate. Leaf-blades filiform, flat or convolute, 8–35 cm long, 0.5–3 mm wide, stiff. Leaf-blade surface scaberulous, rough adaxially or on both sides, glabrous. Leaf-blade margins ciliate, hairy at base. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle open, equilateral, 10–25 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.4–0.5 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 1 length of upper glume, hyaline, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex setaceously acuminate. Upper glume lanceolate, 6–8 mm long, 1.5–2 length of adjacent fertile lemma, hyaline, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, subterete, 4–5.5 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy on back. Lemma margins convolute, covering most of palea. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn geniculate or bigeniculate, 10–18 mm long overall, with 6–12 mm long limb, with a straight or slightly twisted column. Column of lemma awn 2–4 mm long, glabrous. Palea 3–3.5 mm long, 2 -veined, without keels. Palea surface pilose, hairy on back (extending beyond tip).

Flower and Fruit. Lodicules 3. Anthers 3, 2–2.4 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, oblong, 2–3 mm long (x0.9–1mm). Hilum linear, 1 length of caryopsis.

Cleistogenes present, in upper sheaths or in lower sheaths.

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

Region. Northern Europe (*).

Country /Province /State. : GB Aliens (Ryves et al). **Australia.** New South Wales. **Western South America, Southern South America.** Peru. Argentina Northeast, Chile Central, Uruguay.

Western Slopes. Catamarca, Mendoza, Salta, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Cordoba, Distrito Federal, Entre Rios, La Pampa, Santa Fe. Río Negro.

Jarava brevipes (E.Desv.) Penail. Gayana, *Bot.* 59(1): 30 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa brevipes* E.Desv., C. Gay, *Fl. Chil.* 6: 282 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile: Gay 1106 (P holotype).

Illustrations (Books): M.N.Correa, *Flora Patagonica* Parte III, Gramineae (1978) (320, Fig 214 as *Stipa*).

Derivation (Clifford & Bostock 2007): *L. brevis*, short; *pes*, foot. Pedicels short.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Stolons present. Culms 50–100 cm long, 1–2 mm diam., 4–5 -noded. Culm-nodes swollen, pallid or brown or purple, glabrous. Leaf-sheaths smooth, glabrous on surface. Leaf-sheath oral hairs ciliate. Ligule a ciliolate membrane, 0.4–1 mm long. Leaf-blades filiform, conduplicate, 15–30 cm long, 0.4–1 mm wide, stiff or firm. Leaf-blade surface ribbed. Leaf-blade apex mucous or pungent.

Inflorescence. Inflorescence a panicle, comprising 15–30 fertile spikelets. Panicle open, linear. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 1–10 mm long, ciliate.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 11–15 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 1 mm long, pilose, acute. Floret callus hairs 2 mm long.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, much thinner on margins, without keels, 5 -veined. Lower glume apex acuminate. Upper glume lanceolate, 11–15 mm long, membranous, with hyaline margins, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 7–9.8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs 1–1.3 mm long. Lemma apex dentate, 2 -fid, with lobes 1 mm long, awned, 1 -awned. Principal lemma awn from a sinus, bigenulate, 23–35 mm long overall, with twisted column. Middle segment of lemma awn 5–9 mm long. Column of lemma awn 4–10 mm long, pubescent, with 0.7–0.8 mm long hairs. Palea 5–7 mm long, without keels. Palea surface pilose. Palea apex ciliate.

Flower and Fruit. Lodicules 3. Anthers 3, yellow, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6–7 mm long. Hilum linear.

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

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

Mendoza. Chubut, Neuquén, Río Negro, Santa Cruz.

Jarava breviseta (Caro & E.A.Sanchez) Penail. Gayana, *Bot.* 59(1): 30 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa breviseta* Caro & E.Sanchez, *Kurtziana*, 7: 100 (1973). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Cachipampa: Hueck 200 (LIL holotype).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (383).

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 23–32 cm long, 2 -noded. Lateral branches lacking. Leaf-sheaths striately veined, glabrous on surface. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades straight, filiform, conduplicate, 4.5–16 cm long, 0.5 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially or on both sides. Leaf-blade margins smooth or scaberulous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle spiciform, linear, 6–7 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.25 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6 mm long, 1 length of upper glume, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 6 mm long, membranous, without keels, 3 -veined. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 3 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, with this appendage 2 mm long, awned, 1 -awned. Principal lemma awn geniculate, 8 mm long overall, with a straight or slightly twisted column, deciduous. Column of lemma awn 3 mm long. Palea 1 mm long, 2 -veined.

Flower and Fruit. Lodicules 2. Caryopsis with adherent pericarp, fusiform, isodiametric, 2–2.5 mm long, dark brown. Hilum linear, 0.33 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

Jarava castellanosii (F.A. Roig) Peñail. *Contr. U.S. Natl. Herb.* 48: 404. 2003. (Oct 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 *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa castellanosii* F.A. Roig, *Revista Fac. Ci. Agrar. Univ. Nac. Cuyo* 12: 82, t. 2 (1965). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mendoza: Las Heras, Río Casa de Piedra, 19 Feb 1965, *F. Roig & Ruiz Leal* 5296 HT: BAA; IT: LP.

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (384).

Derivation (Clifford & Bostock 2007): In honor of Alberto Castellanos (1896–1968) Argentinian botanist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 90–100 cm long, 2–3 mm diam. Culm-nodes swollen, brown, glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 2 mm long. Ligule a ciliolate membrane, 0.5–1.5 mm long, hyaline. Leaf-blades filiform, flat or convolute, 12–20 cm long, 1 mm wide, stiff. Leaf-blade surface scaberulous, glabrous. Leaf-blade apex acuminate, muticous.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle spiciform, linear, 15–25 cm long, 1.5–2 cm wide. Primary panicle branches appressed, 2–3 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6.2–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, pubescent, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6.2–7 mm long, 1 length of upper glume, hyaline, without keels. Lower glume apex setaceously

acuminate. Upper glume lanceolate, 6.2–7 mm long, 2 length of adjacent fertile lemma, hyaline, without keels. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear to lanceolate, subterete, 3.8–4 mm long, 0.25 mm wide, scarious, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous, rough above, pilose, hairy below. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn flexuous, 30–38 mm long overall, deciduous, abscissing from top of lemma. Palea 1 mm long.

Flower and Fruit. Anthers 3, yellow. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina South.
Catamarca, Jujuy, La Rioja, Mendoza, San Juan, Tucuman.

Jarava durifolia (Parodi ex Torres) Penail. *Contr. U. S. Natl. Herb.* 48: 404 (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 *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa durifolia* M.A. Torres, *Monogr. Comis. Invest. Ci. Prov. Buenos Aires*, 13: 54 (1997). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Tres Cruces: Soriano 637 (BAA holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (385).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 40–70 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, smooth, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs lacking. Ligule a ciliolate membrane, 1 mm long. Collar glabrous. Leaf-blades filiform, convolute, 10–25 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface glabrous, hairless except near base. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 10–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 4.5–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.2–0.3 mm long, glabrous or sparsely hairy, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 4.5–7 mm long, 1 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex attenuate. Upper glume lanceolate, 4.5–7 mm long, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 3–3.7 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, exposing palea. Lemma apex awned, 1 -awned. Principal lemma awn flexuous, 8–12 mm long overall, deciduous. Palea 1.2–1.4 mm long, 0 -veined, without keels. Palea surface puberulous, hairy on back.

Flower and Fruit. Lodicules 2. Anthers 1, anther tip penicillate. Caryopsis with adherent pericarp, ellipsoid, 2.7–2.9 mm long. Hilum linear, 0.66 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest.
Jujuy, Tucuman.

Jarava filifolia (Nees) Ciald. *Fl. Vasc. Argent.* 3(2): 385 (2012).

TYPE from Argentina.

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (385).

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms erect, slender, 30–80 cm long, 0.5–0.9 mm diam. Lateral branches lacking. Ligule an eciliate membrane, 0.5–1 mm long. Leaf-blades straight or curved, filiform, convolute, 15–30 cm long, 0.3–0.5 mm wide. Leaf-blade surface scaberulous, rough abaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Peduncle deflexed. Panicle contracted, linear or oblong, 10–20 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, compressed slightly, 6–7 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–7 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 6–7 mm long, 2.5 length of adjacent fertile lemma, hyaline, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, laterally compressed, 2–2.5 mm long, chartaceous, without keel. Lemma surface puberulous. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 25–35 mm long overall, with a straight or slightly twisted column. Palea 0 -veined, without keels.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil and Southern South America.

Jarava hypsophila (Speg.) Penail. Gayana, *Bot.* 59(1): 31 (2002).

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

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa hypsophila* Speg., *Ret Argent. Bot.* 1: 33 (1925). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Laguna de los Horcones: Anon 2415 (LP holo, BAA, US).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (386), M.N.Corrêa, *Flora Patagonica* Parte III, Gramineae (1978) (322, Fig. 215 as *Stipa*).

Derivation (Clifford & Bostock 2007): Gk. *hyspi*, aloft; *phileo*, love. Alpine species.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–50 cm long. Culm-internodes distally glabrous. Lateral branches lacking. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs woolly. Ligule an eciliate membrane, 0.2–0.5 mm long, pubescent on abaxial surface. Leaf-blades deciduous at the ligule, filiform, convolute, 2.5–10 cm long, 0.5–0.7 mm wide, stiff. Leaf-blade surface glabrous. Leaf-blade apex acute, pungent.

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

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–10 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 0.7–1 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–10 mm long, 1 length of upper glume, hyaline, without keels, 1–3 -veined. Lower glume lateral veins absent or distinct. Lower glume apex attenuate. Upper glume lanceolate, 7–10 mm long, 2 length of adjacent fertile lemma, hyaline, without keels, 1–3 -veined. Upper glume lateral veins absent or distinct. Upper glume apex attenuate.

Florets. Fertile lemma linear, subterete, 4–5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface smooth or asperulous, rough above, pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 0.3–0.4 mm long, awned, 1 -awned. Principal lemma awn from a sinus, geniculate or bigeniculate, 32–55 mm long overall, with 20–39

mm long limb, with twisted column. Column of lemma awn 5–10 mm long, glabrous. Palea 1.4–1.8 mm long, 2 -veined, without keels.

Flower and Fruit. Lodicules 2. Anthers 3, 1.5 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2.8–3 mm long, dark brown. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

Mendoza. La Pampa. Neuquén, Río Negro.

Jarava hystrixina (Speg.) Penail. *Contr. U. S. Natl. Herb.* 48: 405 (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 *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Uruguay. **Basionym or Replaced Name:** *Stipa hystrixina* Speg., *Anal. Mus. Montevid.* 4: II. 115 (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Uruguay, Cuesta de la Tronera: Coll?.

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (386).

Derivation (Clifford & Bostock 2007): Gk. *-ina*, belonging to. Inflorescence a spicate panicle thereby resembling that of *Hystrix*.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–20 cm long, 0.75–1.25 mm diam. Culm-internodes smooth, distally glabrous. Culm-nodes glabrous. Leaf-sheaths smooth, glabrous on surface, outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule a fringe of hairs. Leaf-blades straight or tortuous, acuminate or filiform, conduplicate, 5–10 cm long, 0.75–1 mm wide, stiff, light green. Leaf-blade venation with 6–10 secondary veins. Leaf-blade surface ribbed, grooved adaxially, scaberulous, rough adaxially. Leaf-blade apex abruptly acute, pungent.

Inflorescence. Inflorescence a panicle, subtended by an inflated leaf-sheath, exserted or embraced at base by subtending leaf. Panicle spiciform, linear, 5–10 cm long, 0.5–1 cm wide. Panicle axis 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, subterete, 5.5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.15 mm long, glabrous, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 5.5–6 mm long, 1 length of upper glume, hyaline, pallid or purple, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex setaceously acuminate. Upper glume linear, 5.5–6 mm long, hyaline, pallid or purple, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex setaceously acuminate.

Florets. Fertile lemma lanceolate, subterete, 4–4.5 mm long, membranous, without keel, 5 -veined, more than 3-veined. Lemma surface puberulous. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, awned, 1 -awned. Principal lemma awn geniculate, 14–15 mm long overall, with a straight or slightly twisted column, deciduous. Column of lemma awn glabrous. Palea 0.25 length of lemma, 0 -veined, without keels. Palea apex obtuse.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest. Catamarca, Jujuy, La Rioja, Salta, San Juan.

Jarava ichu Ruiz & Pav. *Fl. Per.* i. 5 (1798).

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

TYPE from Peru. **Basionym or Replaced Name:** *Stipa ichu* (Ruiz & Pav) Kunth, *Rev. Gram.* 1: 60 (1829). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru: Ruiz & Pavon (MA holo, P).

Recent Synonyms: *Stipa eriostachya* H. B. & K., *Nov. Gen. et Sp.* i. 127. t. 41 (1815). *Stipa gynerioides* Phil., *Anal. Univ. Chil.* 103 (1870).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (388), M.E.Barkworth et al, *Flora of North America north of Mexico* Vol 24 *Poaceae*, part 1 (2007) (180), S.A.Renvoize, *Gramineas de Bolivia* (1998) (Fig. 14 as *Stipa*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (262, Fig 67 as *Stipa gynerioides*), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (317, Fig 208 as *Stipa gynerioides*).

Illustrations (Journals): *Ruizia* (13:70, Fig 8b (1993) as *Stipa*).

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

Derivation (Clifford & Bostock 2007): Quechua, straw or grass-like plant. Name for several grass species in Peru.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms (50–)80–100 cm long. Culm-internodes smooth to scaberulous, distally glabrous or pubescent. Leaves basal and cauline, differentiated into sheath and blade. Leaf-sheaths wider than blade at the collar, smooth or scaberulous, glabrous on surface. Leaf-sheath oral hairs bearded. Ligule an eciliate membrane, 0.7 mm long, hyaline, lacerate, truncate. Leaf-blades erect to ascending, filiform, conduplicate, 15–45 cm long, 0.5–0.9 mm wide, stiff. Leaf-blade surface scaberulous. Bisexual.

Inflorescence. Inflorescence a panicle. Panicle contracted, lanceolate to elliptic, 18–40 cm long. Primary panicle branches bearing spikelets almost to the base. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

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 oblanceolate, subterete, 7–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, straight to curved, 0.1 mm long, bearded, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma, shiny. Lower glume lanceolate, 9–11 mm long, 1–1.1 length of upper glume, hyaline, pallid or purple, without keels, 3 -veined. Lower glume margins flat. Lower glume apex setaceously acuminate. Upper glume lanceolate, 9–11 mm long, 3 length of adjacent fertile lemma, hyaline, pallid or purple, without keels, 3 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear to lanceolate, subterete, 2.5–3 mm long, membranous to scarious, dark brown, without keel, 5 -veined, more than 3-veined, several-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, with this appendage 3–4 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 11–13 mm long overall, with 5–8 mm long limb, with twisted column, deciduous, abscissing from top of lemma, limb scabrous. Palea lanceolate or oblong, tightly convolute around flower, 0.3 length of lemma, 2 -veined, without keels. Palea apex entire, obtuse.

Flower and Fruit. Lodicules 3, oblong, 0.5 mm long, membranous, obtuse. Anthers 3, 0.6–0.7 mm long. Stigmas 2. Caryopsis with adherent pericarp, fusiform. Hilum linear.

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

Country /Province /State. **Southwestern USA, Mexico.** California. Central Mexico, Northeast Mexico, Gulf (Mexico), Southwest Mexico, Southeast Mexico. **Mesoamerica, Northern South America, Western South America, Southern South America.** Costa Rica, El Salvador, Guatemala. Venezuela. Bolivia, Colombia, Ecuador, Peru. Argentina Northwest.

Catamarca, Jujuy, La Rioja, Mendoza, Salta, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Cordoba, Entre Rios, La Pampa, Santa Fe. Río Negro. Distrito Federal, Mexico State, Morelos, Puebla, Tlaxcala. Coahuila, Hidalgo, San Luis Potosí. Veracruz. Michoacan, Oaxaca. Chiapas.

Jarava illimanica (Hack.) F.Rojas. *Gayana, Bot.* 54(2): 173 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Bolivia. **Basionym or Replaced Name:** *Stipa illimanica* Hack., Fedde, *Repert.* 11: 22 (1912). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bolivia, Cotano: Buchtien 3134 (W holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (389), S.A.Renvoize, *Gramineas de Bolivia* (1998) (79, Fig 16 as *Stipa*).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations extravaginal. Culms geniculately ascending, 25 cm long, 5–6 -noded. Lateral branches lacking. Leaf-sheaths scaberulous, outer margin hairy. Ligule an eciliate membrane, 0.7 mm long, truncate. Leaf-blades filiform, flat or conduplicate, 10–18 cm long, 1 mm wide. Leaf-blade surface ribbed. Leaf-blade margins scaberulous.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, linear, 14 cm long. Primary panicle branches 3 -nate. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

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

Florets. Fertile lemma lanceolate, subterete, 4–4.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 30 mm long overall, with a straight or slightly twisted column. Palea 1–1.5 mm long, 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Anthers 3, 1.5 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest. Salta.

Jarava juncoides (Speg.) Penail. *Gayana, Bot.* 59(1): 31 (2002).

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

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa juncoides* Speg., *Contr. Fl. Ventana*, 68 (1896). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Sierra Ventana: Spegazzini (LP holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (389), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (285, Fig. 73 as *Stipa*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (as *Stipa*).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, slender, 30–55 cm long. Culm-internodes distally glabrous. Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs lacking. Ligule an eciliate membrane, 0.5–4 mm long, bilobed. Leaf-blades persistent or deciduous at the ligule, terete, 5–10 cm long, 0.4–0.8 mm wide, stiff. Leaf-blade surface smooth, glabrous. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, linear, loose, 8–25 cm long, bearing many spikelets or few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 11–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1–2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11–17 mm long, 1.1 length of upper glume, hyaline, pallid, without keels, 3 -veined. Lower glume apex setaceously acuminate. Upper glume lanceolate, 11–17 mm long, 2 length of adjacent fertile lemma, hyaline, pallid, without keels, 3 -veined. Upper glume apex setaceously acuminate.

Florets. Fertile lemma linear, subterete, 5–7(–7.5) mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface papillose, rough above, pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, awned, 1 -awned. Principal lemma awn bigeniculate, 50–80 mm long overall, with 38–60 mm long limb, with twisted column. Column of lemma awn 8–12 mm long, glabrous. Palea 1.2–2 mm long, 2 -veined, without keels.

Flower and Fruit. Lodicules 3. Anthers 3, 2–3.5 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 4–5 mm long. Hilum linear, 0.66 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Brazil, Southern South America. Argentina Northeast, Uruguay. San Luis. Buenos Aires, Cordoba, La Pampa. Río Negro.

Jarava leptostachya (Griseb.) F.Rojas. *Gayana, Bot.* 54(2): 173 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa leptostachya* Griseb., *Goett. Abh.* 24: 299 (1879). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Nevado del Castillo: Lorentz & Hieronymus 70 (GOET holo, CORD, US).

Recent Synonyms: *Stipa capilliseta* Hitchcock, *Contrib. U. S. Nat. Herb.* 24: 271 (1925).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (390).

Derivation (Clifford & Bostock 2007): Gk. *leptos*, narrow; *stachys*, ear of corn. Spikelets long and narrow.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 30–50 cm long. Culm-nodes glabrous. Ligule a ciliolate membrane, 0.5 mm long. Leaf-blades filiform, convolute, 5–20 cm long, 0.5–1 mm wide, stiff. Leaf-blade surface ribbed. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, exserted or embraced at base by subtending leaf. Panicle spiciform, linear, 5–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 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, subterete, 5.5–6.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.2 mm long, glabrous or sparsely hairy, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 4.5–5.5 mm long, 0.9 length of upper glume, membranous, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear, 5.5–6.5 mm long, membranous, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 3.5–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 2.5 mm long. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 20–25 mm long overall, with twisted column, deciduous. Palea 0.8 mm long, without keels. Palea surface puberulous.

Flower and Fruit. Lodicules 2, 0.6 mm long. Anthers 1 or 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2–2.5 mm long. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest, Chile North, Chile Central.
Catamarca, Jujuy, La Rioja, Mendoza, Salta, San Juan, Tucuman. Tarapaca, Antofagasta.

Jarava macbridei (Hitchc.) Penail. *Gayana, Bot.* 59(1): 31 (2002).

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

TYPE from Peru. **Basionym or Replaced Name:** *Stipa macbridei* Hitchcock, *Proc. Biol. Soc. Wash.* 36: 197 (1923). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru, Matucana: MacBride & Featherstone 452 (F holo, K, US).

Illustrations (Journals): *Ruizia* (13:70, Fig 8n-o (1993) as *Stipa*).

Derivation (Clifford & Bostock 2007): in honor of James Francis Macbride (1892-) United States botanist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 60–90 cm long. Ligule an eciliate membrane, 0.5 mm long. Leaf-blades involute, 1 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, 15–25 cm long. Primary panicle branches appressed or ascending. Panicle branches capillary. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–7.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, with lower wider than upper, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels. Lower glume apex acuminate. Upper glume lanceolate, 6–7.5 mm long, membranous, without keels. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 4–5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy all along. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 30–37 mm long overall, with twisted column. Palea without keels.

Flower and Fruit. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

Jarava matthei F.Rojas. *Gayana, Bot.* 54(2): 174 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Bolivia. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Bolivia, Atocha: Peterson et al. 12920 (LPB holo, US).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): In honor of Oscar Matthei Jensen (fl. 1964) Chilean agrostologist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 40–90 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades filiform, convolute, 15–35 cm long, 0.3–1 mm wide. Leaf-blade surface scabrous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 15–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then

both fertile or the upper sterile. Spikelets lanceolate, subterete, 5–7.8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–7.8 mm long, 1 length of upper glume, hyaline, without keels. Lower glume apex acuminate. Upper glume lanceolate, 5–7.8 mm long, hyaline, without keels. Upper glume apex acuminate.

Florets. Fertile lemma linear, subterete, 3.5–4.5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, awned, 1 -awned. Principal lemma awn flexuous, 50–60 mm long overall. Palea without keels.

Flower and Fruit. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Chile North. Tarapaca, Antofagasta.

Jarava media (Speg.) Penail. *Contr. U. S. Natl. Herb.* 48: 406 (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 *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa manicata* var. *media* Speg., *An. Mus. Nac. Montevideo* 4:77 (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Tandil: Coll?.

Recent Synonyms: *Stipa media* (Speg.) Caro, *Kurtziana* 3 25 (1966).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (391).

Derivation (Clifford & Bostock 2007): L. middle. Characters midway between two or more other species.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect or geniculately ascending, 30–300 cm long. Culm-nodes glabrous. Lateral branches ample. Ligule an eciliate membrane, 0.2–2 mm long. Leaf-blades convolute, 10–20 cm long, 0.5–4 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 10–25 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, subterete, 5–6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 5–6 mm long, 1.1 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 4.5–5.5 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 3–3.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn bigeniculate, 25–30 mm long overall, with a straight or slightly twisted column, limb plumose, with 2–2.5 mm long hairs. Middle segment of lemma awn ciliate. Palea 1–1.4 mm long, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3, 0.9–1.4 mm long. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 2–2.5 mm long. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

Jujuy, La Rioja, Salta, San Juan, Tucuman.

Jarava milleana (Hitchc.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Ecuador. **Basionym or Replaced Name:** *Stipa milleana* Hitchcock, *Contrib. U. S. Nat. Herb.* 24: 269 (1925). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Ecuador, Quito: Mille 256 (US holo, MO).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): L. *-ana*, indicating connection. In honor of Louis Mille (1873–1954) Belgian-born Ecuadorean cleric and botanist.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial. Culms erect, 50–100 cm long, 3–6 -noded. Culm-internodes distally pubescent. Leaf-sheaths smooth or retrorsely scabrous. Ligule an eciliate membrane, 0.5–1 mm long. Collar pubescent. Leaf-blades 30–40 cm long, 4–8 mm wide. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, lanceolate, interrupted, dense, 20–40 cm long. Primary panicle branches appressed or ascending, 2–5 cm long. Panicle axis smooth. 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, subterete, 6 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.3 mm long, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume primary vein scaberulous. Lower glume apex setaceously acuminate. Upper glume lanceolate, 6 mm long, membranous, without keels, 3 -veined. Upper glume primary vein scaberulous. Upper glume apex setaceously acuminate.

Florets. Fertile lemma elliptic, subterete, 2 mm long, coriaceous, mid-green or light brown, without keel, 5 -veined, more than 3-veined. Lemma surface pilose. Lemma margins convolute, covering most of palea. Lemma hairs 1 mm long. Lemma apex surmounted by a ring of hairs, with this appendage 2–3 mm long, awned, 1 -awned. Principal lemma awn geniculate, 10–13 mm long overall, with twisted column. Palea without keels.

Flower and Fruit. Lodicules 3. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

Jarava neaei (Nees ex Steud.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Falkland Islands. **Basionym or Replaced Name:** *Stipa neaei* Nees ex Steud., *Syn. Pl. Gram.* 126 (1854). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Falkland Is., Berkely Sound: Anon (B holo, K).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (391), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (248, Fig. 67 as *Stipa*), M.N.Corrêa, *Flora Patagonica* Parte III, Gramineae (1978) (297, Fig 191 as *Stipa*).

Derivation (Clifford & Bostock 2007): in honor of Neae but origin uncertain, not given by author.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Stolons present. Butt sheaths pubescent. Culms erect or geniculately ascending, 30–150 cm long. Culm-internodes distally pubescent. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 1–5 mm long. Leaf-blades deciduous at the ligule, conduplicate or convolute, 10–32 cm long, 0.5–2 mm wide, stiff. Leaf-blade surface pilose, hairy adaxially.

Inflorescence. Inflorescence a panicle. Panicle open, nodding, 10–20 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 15–25 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1–2 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1.1–1.2 length of upper glume, hyaline, mid-green or purple, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 11–21 mm long, 2–3 length of adjacent fertile lemma, hyaline, mid-green or purple, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–13 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins convolute, covering most of palea. Lemma apex attenuate, awned, 1 -awned. Principal lemma awn geniculate, 85–140 mm long overall, with 65–110 mm long limb, with a straight or slightly twisted column, limb plumose, with 2–10 mm long hairs. Column of lemma awn 14–40 mm long, glabrous. Palea 4–7.5 mm long, 0.66 length of lemma, 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, 4–7 mm long, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 7–8 mm long, dark brown. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

Catamarca, Mendoza, San Juan. Buenos Aires, La Pampa. Chubut, Neuquén, Río Negro, Santa Cruz. Coquimbo, Valparaiso, Santiago, Maule. Aisen.

Jarava pachypus (Pilg.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Peru. **Basionym or Replaced Name:** *Stipa pachypus* Pilger, *Engl. Jahrb. lvi. Beibl.* 123, 25 (1920). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru, Mollendo: Weberbauer 1487 (B holo, US).

Illustrations (Journals): *Ruizia* (13:70, Fig 8h-i (1993) as *Stipa*).

Derivation (Clifford & Bostock 2007): Gk. *pachys*, thick; *pous*, foot. Possibly a reference to a thickened pedicel.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose, clumped densely. Culms 20–45 cm long. Culm-nodes constricted, glabrous. Ligule an eciliate membrane, 1 mm long. Leaf-blades involute, 2–7 cm long, 1–2 mm wide, stiff. Leaf-blade surface ribbed, pubescent, hairy adaxially. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 6–14 cm long, bearing few spikelets. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume linear, 8–9 mm long, 1.1 length of upper glume, membranous, without keels. Lower glume apex setaceously acuminate. Upper glume linear, 7–8 mm long, membranous, without keels. Upper glume apex setaceously acuminate.

Florets. Fertile lemma lanceolate, subterete, 3.5–4 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 3.3 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 13–18 mm long overall, with twisted column. Palea 2.5–2.8 mm long, without keels. Palea surface pubescent.

Flower and Fruit. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

Jarava plumosa (Spreng.) S.W.L. Jacobs & J. Everett. *Telopea*, 7(3): 301: (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006), D.Sharp, D. & B.K.Simon, *AusGrass* (2002).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa plumosa* Trin., *Mem. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat.* 4(2, 1): 37 (1836)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: IT: *F. Sello s.n.*, Uruguay: Montevideo (US).

Recent Synonyms: *Stipa papposa* Nees, *Agrost. Bras.* 377 (1829).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (392), J.P.Jessop, G.R.M. Dashorst & F.M.James, *Grasses of South Australia* (2006) (106, Fig 68), A.Wilson (ed.), *Flora of Australia*, Vol 44A. *Poaceae* (2009) (63, Fig 9), D.Sharp & B.K.Simon, *AusGrass*. *Grasses of Australia*. CD-Rom Version 1.0. (2002), S.A.Renvoize, *Gramineas de Bolivia* (1998) (79, Fig 16 as *Stipa*), A.Burkat, *Flora Ilustrada de Entre Rios (Argentina)*, Pt II, *Gramineas* (1969) (145, Fig. 47 as *Stipa*), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (267, Fig. 69 as *Stipa*), M.N.Correa, *Flora Patagonica Parte III, Gramineae* (1978) (314, Fig. 206 as *Stipa*), B.Rosengurt, *Gramineas Uruguayas I* (1970) (74, Fig. 23 & 78, Fig. 25 as *Stipa papposa*).

Derivation (Clifford & Bostock 2007): L. feathery. With the awn or one of its members densely hairy.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 25–80 cm long. Ligule an eciliate membrane. Leaf-blades filiform, convolute, 2–18 cm long, 1–2 mm wide, stiff. Leaf-blade apex attenuate.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 4–12 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–9 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, 1–1.5 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, shorter than spikelet, thinner than fertile lemma. Lower glume linear, 4–5.5 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume linear, 4–5.5 mm long, 0.6–0.7 length of adjacent fertile lemma, hyaline, without keels, 1 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 6–9 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface scabrous, rough in lines, villous, hairy above. Lemma margins convolute, covering most of palea. Lemma hairs 5–8 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate or bigeniculate, 20–30 mm long overall. Palea elliptic, 0.2–0.3 length of lemma, hyaline, 2 -veined, without keels.

Flower and Fruit. Lodicules 2, oblanceolate, 1 mm long, membranous. Anthers 3, 3.5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, linear, 4–5 mm long. Hilum linear.

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

Country /Province /State. Australia (*). South Australia (*). **Southwestern USA.** California. **Western South America, Brazil, Southern South America.** Bolivia, Peru. Brazil South. Argentina Northwest, Chile Central, Uruguay.

Southern. Rio Grande do Sul, Santa Catarina. Catamarca, Jujuy, Santiago del Estero, San Luis, Tucuman. Buenos Aires, Cordoba, Corrientes, Entre Rios, La Pampa, Misiones, Santa Fe. Río Negro. Tarapaca, Antofagasta, Atacama, Coquimbo, Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valpariso. Coquimbo, Valparaiso, Santiago, O'Higgins, Maule, Biobio, La Araucania.

Jarava plumosula (Nees ex Steud.) F.Rojas. *Gayana, Bot.* 54(2): 173 (1998).

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:** *Stipa plumosa* Trin., *Bull. Sc. Acad. Petersb.* 1: 67 (1836). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile: Cuming (LE holo, K).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (393), A.L.Cabrera, *Flora de la Provincia de Buenos Aires, IV Pt 2 Gramineas* (1970) (as *Stipa papposa*).

Classification. Subfamily Pooideae. Tribe: Stipeae.

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

Country /Province /State. **Western South America, Southern South America.** Bolivia, Peru. Chile North, Chile Central.

Catamarca, Jujuy, Santiago del Estero, San Juan, San Luis, Tucuman. Buenos Aires, Cordoba, Corrientes, Entre Rios, La Pampa, Santa Fe. Río Negro. Antofagasta. Coquimbo, Valparaiso, Santiago.

Jarava pogonathera (E.Desv.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa pogonathera* E.Desv., C. Gay, *Fl. Chil.* 6: 277 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile, Coquimbo: Gay (P holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (394).

Derivation (Clifford & Bostock 2007): Gk. *pogon*, beard; *ather*, spike as of ear of wheat. Awn plumose.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial. Rhizomes elongated. Culms 35–100 cm long. Culm-internodes distally glabrous or pilose. Culm-nodes glabrous. Ligule a ciliolate membrane, 1–3 mm long. Leaf-blades filiform, convolute, 10–20 cm long, 0.5 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, elliptic, 10–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–10 mm long, pubescent, hairy above.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 17–22 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 0.8–1.1 mm long, glabrous, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 17–22 mm long, 1.3 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 13–17 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 8–13 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, awned, 1 -awned. Principal lemma awn bigeniculate, 60–110 mm long overall, with twisted column, limb ciliate, glabrescent towards tip. Middle segment of lemma awn plumose. Column of lemma awn 10–20 mm long, glabrous. Palea 0.6–0.8 mm long, 0.66 length of lemma, 2 -veined, without keels. Palea surface glabrous or puberulous.

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

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

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

Mendoza. Tarapaca, Antofagasta, Atacama, Coquimbo, Rest of Chile- Biobio, La Auracania, Maule, O'Higgins, Santado, Valparaiso. Antofagasta, Atacama. Coquimbo, Valparaiso, Santiago, Maule.

Jarava polyclada (Hack.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa polyclada* Hackel apud Stuckert, *An. Mus. Nac. Buenos Aires*, 21: 80 (1911). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Quebrada del Oro: Stuckert 17118 (W lecto, CORD, LIL, US).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (395).

Derivation (Clifford & Bostock 2007): Gk. *polys*, several; *klados*, branch. Plants with much branched culms often with the branches in fascicles.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, culms solitary. Basal innovations extravaginal. Culms 50–100 cm long. Culm-internodes distally glabrous. Culm-nodes glabrous. Lateral branches ample. Leaf-sheaths puberulous. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.5 mm long, acute. Leaf-blades curved or flexuous, flat or convolute, 2.5–15 cm long, 1–3 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially, puberulous, hairy adaxially. Leaf-blade margins smooth. Leaf-blade apex acute.

Inflorescence. Inflorescence a panicle. Panicle open, oblong, 5–20 cm long. Panicle branches capillary, scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 3.5 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.2 mm long, pubescent, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 1–3 -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. Upper glume lanceolate, 3.5 mm long, membranous, without keels, 1–3 -veined. Upper glume lateral veins absent or obscure. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 2.2–3 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex with a short cylindrical neck, awned, 1 -awned. Principal lemma awn geniculate or bigeniculate, 20–35 mm long overall, with a straight or slightly twisted column, deciduous. Column of lemma awn 3 mm long. Palea 1 mm long, 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3, 0.5 mm long. Anthers 3, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 1.5–1.8 mm long, dark brown. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina Northwest.

Catamarca, La Rioja, Salta, Santiago del Estero, San Juan, Tucuman.

Jarava pseudoichu (Caro) F.Rojas. *Gayana, Bot.* 54(2): 173 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa pseudoichu* Caro, Kurtziana, 3: 103 (1966). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Cabalango: Caro 3534 (CORD holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (395).

Derivation (Clifford & Bostock 2007): Gk *pseudos*, false. Resembling *Jarava ichu*.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, robust, 70–200 cm long, 5–7 -noded. Culm-internodes distally pubescent. Culm-nodes glabrous. Lateral

branches lacking. Leaves heterophyllous being wider on the culm (3–6mm). Leaf-sheaths glabrous on surface. Leaf-sheath oral hairs ciliate, 3–4 mm long. Ligule an eciliate membrane, 0.75–1.5 mm long, pubescent on abaxial surface, truncate. Leaf-blades filiform, convolute, 0.5 mm wide. Leaf-blade venation with continuous uniform subepidermal sclerenchyma layer on the underside. Leaf-blade surface ribbed, scaberulous.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, lanceolate, 30–60 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 7–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.15–0.2 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 1(–3) -veined. Lower glume lateral veins absent or obscure. Lower glume apex acuminate. Upper glume lanceolate, 7–8 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 2–2.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 3–4 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 10–15 mm long overall, with a straight or slightly twisted column. Palea 1 mm long, 0 -veined, without keels. Palea surface pilose.

Flower and Fruit. Lodicules 2 or 3, 0.7 mm long. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 1.8–2 mm long, dark brown. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Northern South America, Western South America, Southern South America. Venezuela. Bolivia, Colombia. Argentina Northwest.

Catamarca, Jujuy, La Rioja, Mendoza, Salta, San Luis, Tucuman. Cordoba, Distrito Federal, La Pampa.

Jarava psylantha (Speg.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa psylantha* Speg., *Rev. Argent. Bot.* 1: 16 (1925). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Rio Santa Cruz: Bisego (LP lecto).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (396), M.N.Correra, *Flora Patagonica* Parte III, Gramineae (1978) (291, Fig 188 as *Stipa*).

Derivation (Clifford & Bostock 2007): Gk *psilos*, bare; *anthos*, flower. Florets glabrous.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–30 cm long. Culm-internodes distally pubescent. Culm-nodes glabrous. Leaf-sheaths pubescent, with reflexed hairs. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 3–5 mm long, acute. Leaf-blades deciduous at the ligule, filiform, convolute, 3–20 cm long, 0.5–1 mm wide, stiff. Leaf-blade apex attenuate, hardened.

Inflorescence. Inflorescence a panicle. Panicle open, dense, nodding, 5–19 cm long, bearing few spikelets. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, ciliate, hairy all along but hairs longer above, with 1.5–4 mm long hairs.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 18–30 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 1.5–3 mm long, pubescent, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1.1 length of upper glume, hyaline, yellow or purple, without keels, 3–5 -veined. Lower glume apex attenuate. Upper glume lanceolate, 15–25 mm long, 2–3 length of adjacent fertile lemma, hyaline, yellow or purple, without keels, 3–5 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 8.5–11.5 mm long, coriaceous, dark brown, without keel, 5 -veined, more than 3-veined. Lemma surface pilose, hairy below. Lemma margins convolute, covering most of palea. Lemma apex dentate, 2 -fid, with lobes 0.7 mm long, awned, 1 -awned. Principal lemma awn curved or geniculate, 70–110 mm long overall, with a straight or slightly twisted column, limb plumose, with 2–10 mm long hairs, glabrescent towards tip. Column of lemma awn 17–30 mm long, plumose, with 2–10 mm long hairs. Palea 1 length of lemma, 2 -veined, without keels. Palea surface pubescent.

Flower and Fruit. Lodicules 3. Anthers 3, 4.5–5 mm long. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 7–7.5 mm long. Hilum linear, 1 length of caryopsis.

Distribution (TDWG). Continent. South America.

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

Mendoza. Buenos Aires. Chubut, Neuquén, Río Negro, Santa Cruz. Magellanes.

Jarava pungens (Nees & Meyen) Matthei. *Gayana, Bot.* 54(2): 190 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Peru. **Basionym or Replaced Name:** *Stipa pungens* Nees & Meyen, Meyen, *Reise*, 1: 484 (1843). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Peru, Arequipa: Meyen 1436 (B holo, CORD, LE).

Illustrations (Books): S.A.Renvoize, *Gramineas de Bolivia* (1998) (76, Fig 15 as *Stipa*).

Derivation (Clifford & Bostock 2007): *L. pungo*, prick. Leaf-blades sharp-pointed.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms erect, 15–70 cm long. Lateral branches lacking. Ligule an eciliate membrane. Leaf-blades involute, 10–30 cm long, 1–2 mm wide. Leaf-blade surface scaberulous. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, oblong, 5–6 cm long. Primary panicle branches appressed. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

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

Florets. Fertile lemma linear, subterete, 3–3.5(–4) mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs. Lemma margins convolute, covering most of palea. Lemma hairs 2–4 mm long. Lemma apex with a short cylindrical neck, awned, 1 -awned. Principal lemma awn geniculate or bigeniculate, 15–30 mm long overall, with twisted column. Palea without keels.

Flower and Fruit. Anthers 3. Stigmas 2. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia, Peru. Argentina Northwest, Chile North.

Jujuy, Salta. Tarapaca, Antofagasta.

Jarava pungionata (Caro & E.A. Sánchez) Matthei. *Gayana, Bot.* 54 (2): 191. 1997[1998]. (29 Apr 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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa pungionata* Caro & E.A. Sánchez, *Kurtziana* 7: 109, f. 9 (1973). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Prov. Catamarca: Dep. Antofagasta: Incahuasi, 4000 m, 1 Apr 1950, Hueck 512 HT: BA; IT: BAA, LIL.

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (396).

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 25 cm long, 1–2 -noded. Lateral branches lacking. Leaf-sheaths subequal to internodes, striately veined, glabrous on surface. Ligule a ciliolate membrane, 0.3 mm long, hyaline, truncate. Leaf-blades filiform, conduplicate, 7–12 cm long, 0.6–0.8 mm wide, stiff. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade margins pubescent. Leaf-blade apex attenuate, pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle spiciform, linear, 6–9 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 11–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1.2 mm long, pubescent, acute.

Glumes. Glumes similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 11–12 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume apex acuminate. Upper glume lanceolate, 11–12 mm long, 2 length of adjacent fertile lemma, hyaline, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 5–5.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent. Lemma margins convolute, covering most of palea. Lemma apex surmounted by a ring of hairs, with this appendage 3 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 25–30 mm long overall, with twisted column. Palea tightly convolute around flower, 2 mm long, 2 -veined, without keels. Palea surface pubescent, hairy on back.

Flower and Fruit. Lodicules 2. Stigmas 2. Caryopsis with adherent pericarp, fusiform, 3.5 mm long. Hilum linear, 0.33 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Chile North.

Catamarca. Tarapaca, Antofagasta.

Jarava scabrifolia (Torres) Penail. *Contr.U.S.Natl. Herb.* 48: 407 (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 *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa scabrifolia* M.A. Torres, *Monogr. Comis. Invest. Ci. Prov. Buenos Aires*, 13: 61 (1997). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Lara: Rodriguez 286 (LIL holo, BA).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (397).

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

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect or geniculately ascending, 35–60 cm long. Culm-internodes distally glabrous. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Ligule an eciliate membrane. Collar glabrous. Leaf-blades filiform, convolute, 10–17 cm long, 0.3–0.5 mm wide. Leaf-blade surface scaberulous, rough abaxially, puberulous, hairy adaxially.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle contracted, linear, 10–12 cm long. Panicle branches scaberulous. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, puberulous.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 6–8 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.5 mm long, glabrous, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 6–8 mm long, 1 length of upper glume, membranous, without keels, 1 -veined. Lower

glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 6–8 mm long, membranous, without keels, 3 -veined. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 3–4 mm long, chartaceous, without keel, 5 -veined, more than 3-veined. Lemma surface asperulous, rough above, pilose, hairy below. Lemma margins convolute, exposing palea. Lemma apex awned, 1 -awned. Principal lemma awn curved, 18–55 mm long overall. Palea 1.5 mm long, 2 -veined.

Flower and Fruit. Lodicules 2. Anthers 3. Caryopsis with adherent pericarp, fusiform, 2–2.5 mm long. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest. Catamarca, La Rioja, Salta, Tucuman.

Jarava scirpea (Speg.) Penail. *Gayana, Bot.* 59(1): 32 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa scirpea* Speg., *Anal. Mus. Montevid.* 4: 137 (1901). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, Mendoza: Spegazzini (LP holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (398).

Derivation (Clifford & Bostock 2007): *L. scirpus*, name of a rush; *-ea*, resembling. In habit resembling *Scirpus*.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Culms 2.5–7 cm long, 0.5–0.6 mm diam. Culm-internodes smooth, distally glabrous. Culm-nodes flush with internodes, glabrous. Leaf-sheaths glabrous on surface, outer margin hairy. Leaf-sheath oral hairs woolly. Ligule an eciliate membrane, erose. Leaf-blades curved, aciculate, conduplicate, 1–4 cm long, 0.5–0.8 mm wide, stiff, light green. Leaf-blade venation with 4–6 secondary veins. Leaf-blade surface puberulous, hairy adaxially. Leaf-blade apex abruptly acute, pungent.

Inflorescence. Inflorescence a panicle, subtended by a spatheole, enclosed. Panicle spiciform, linear, 1–2.5 cm long, 0.3–0.5 cm wide. Panicle axis smooth. 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, subterete, 3.75–4 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus brief, 0.15–0.2 mm long, glabrous, obtuse.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 3.75–4 mm long, 1 length of upper glume, hyaline, without keels, 0 -veined. Lower glume lateral veins absent. Lower glume apex attenuate. Upper glume lanceolate, 3.5–3.75 mm long, hyaline, without keels, 0 -veined. Upper glume primary vein absent. Upper glume lateral veins absent. Upper glume apex attenuate.

Florets. Fertile lemma lanceolate, subterete, 2–2.5 mm long, membranous, pallid, without keel, 5 -veined, more than 3-veined. Lemma margins convolute, covering most of palea. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 16–22 mm long overall, with a straight or slightly twisted column, persistent. Column of lemma awn glabrous. Palea hyaline, 0 -veined, without keels.

Flower and Fruit. Caryopsis with adherent pericarp.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest. Mendoza, San Juan.

Jarava subaristata (Matthei) Matthei. *Gayana, Bot.* 54(2): 192 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa leptostachya* var. *subaristata* Matthei, *Gayana, Bot.* 13:120 (1965). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile, Putre to Chucuyo: Marticorena, Matthei & Quezada 156 (CONC holo).

Recent Synonyms: *Stipa subaristata* (Matthei) Caro & E.Sanchez, *Kurtziana* 7: 96 (1973).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (398).

Derivation (Clifford & Bostock 2007): *L. sub.*, approaching; *arista*, bristle. Lemma sharply acute.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 35–60 cm long, 2 -noded. Lateral branches lacking. Leaf-sheaths striately veined, glabrous on surface. Ligule a ciliolate membrane, 0.3 mm long. Leaf-blades straight, filiform, conduplicate, 10–30 cm long, 0.5–0.8 mm wide, stiff. Leaf-blade surface ribbed, grooved adaxially, scabrous, rough on both sides. Leaf-blade margins smooth. Leaf-blade apex pungent.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle spiciform, linear, 6–9 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

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

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 7–8 mm long, 1 length of upper glume, hyaline, without keels, 1 -veined. Lower glume lateral veins absent. Lower glume surface asperulous. Lower glume apex acuminate. Upper glume lanceolate, 7–8 mm long, hyaline, without keels, 1 -veined. Upper glume lateral veins absent. Upper glume surface asperulous. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 3–3.5 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface pubescent, with conspicuous apical hairs (on neck). Lemma margins convolute, covering most of palea. Lemma hairs 3 mm long. Lemma apex with a short cylindrical neck, with this appendage 0.5–0.7 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 4–10 mm long overall, with 2.5–7 mm long limb, with twisted column. Middle segment of lemma awn 1–1.5 mm long. Column of lemma awn 0.5–1.5 mm long. Palea 1 mm long, 2 -veined.

Flower and Fruit. Lodicules 2, 0.6 mm long. Caryopsis with adherent pericarp, fusiform, isodiametric, 2–2.5 mm long, dark brown. Hilum linear, 0.5 length of caryopsis.

Distribution (TDWG). Continent. South America.

Country /Province /State. Southern South America. Argentina Northwest, Chile North.

Jujuy, Salta, Tucuman. Tarapaca, Antofagasta.

Jarava subnitida (Roseng. & B.R.Arrill.) Penail. *Gayana, Bot.* 59(1): 33 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Uruguay. **Basionym or Replaced Name:** *Stipa subnitida* Roseng. & Arrill. de Maffei, *Bol. Univ. Republ. Fac. Agron. Montevideo*, No. 72, 25 (1964). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Uruguay, Meseta de Artigas: Rosengurt B-9318 (MVFA holo, K).

Illustrations (Books): B.Rosengurt, *Gramineas Uruguayas I* (1970) (76, Fig. 24 & 78, Fig. 25 as *Stipa*).

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Basal innovations intravaginal. Culms erect, 40–95 cm long, 2–4 -noded. Culm-internodes distally glabrous or pubescent. Lateral branches lacking. Leaf-sheaths outer margin hairy. Leaf-sheath oral hairs ciliate. Ligule an eciliate membrane, 0.2–0.6 mm long. Leaf-blades flat or convolute, 7–26 cm long, 2–3.5 mm wide. Leaf-blade surface ribbed.

Inflorescence. Inflorescence a panicle, comprising 10–20 fertile spikelets. Panicle open, elliptic, 12–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 27–33 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 3.5–6.5 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 1 length of upper glume, membranous, without keels, 3 -veined. Lower glume primary vein eciliate or ciliate. Lower glume apex setaceously acuminate. Upper glume lanceolate, 27–33 mm long, membranous, without keels, 5 -veined. Upper glume primary vein eciliate or ciliate. Upper glume apex setaceously acuminate.

Florets. Fertile lemma lanceolate, subterete, 11–15 mm long, coriaceous, shiny, without keel, 5 -veined, more than 3-veined. Lemma midvein ciliate, hairy below. Lemma surface asperulous, rough above. Lemma margins convolute, covering most of palea, ciliate, hairy at base. Lemma apex with a membranous corona, with this appendage 0.6–1 mm long, awned, 1 -awned. Principal lemma awn bigeniculate, 110–130 mm long overall, with twisted column. Column of lemma awn pubescent. Palea 2–2.5 mm long, without keels.

Flower and Fruit. Lodicules 2, 1–1.4 mm long. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform, 6.5–7 mm long. Hilum linear.

Distribution (TDWG). Continent. South America.

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

Jarava subplumosa (Hicken ex F.A.Roig) Penail. *Gayana, Bot.* 59(1): 33 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Argentina. **Basionym or Replaced Name:** *Stipa subplumosa* Roig, *Bol. Soc. Argent. Bot.*, 14(4): 311 (1972). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Argentina, La Bajada del Prtizo: Hauman 28 (SI holo).

Illustrations (Books): F.O.Zuloaga, Z.E.Rugolo & A.M. Anton, *Flora Argentina* 3 – 2 Pooideae (2012) (399), M.N.Corrêa, *Flora Patagonica* Parte III, Gramineae (1978) (291, Fig 190 as *Stipa*).

Derivation (Clifford & Bostock 2007): *L. sub*, approaching. Similar to other species with the epithet *plumosa*.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths pubescent. Culms 60 cm long, 3 mm diam., 2–3 -noded. Culm-internodes smooth, distally glabrous. Culm-nodes constricted or flush with internodes, brown. Leaf-sheaths mostly shorter than adjacent culm internode, glabrous on surface. Leaf-sheath oral hairs ciliate, 1.5–2 mm long. Ligule a ciliolate membrane, 3–4 mm long, 1–1.5 mm long on basal shoots. Leaf-blades conduplicate, 4–12 cm long, 0.5–1 mm wide, coriaceous. Leaf-blade surface smooth, glabrous. Leaf-blade apex acute, pungent.

Inflorescence. Inflorescence a panicle. Panicle contracted, linear, 10–20 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 2–7 mm long, scabrous, ciliate, hairy at tip.

Fertile Spikelets. Spikelets comprising 1 fertile florets, without rhachilla extension. Spikelets of 1 fertile floret with or without additional sterile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets lanceolate, subterete, 13.5–17 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus elongated, curved, 2 mm long, pilose, pungent.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 13–17 mm long, 1 length of upper glume, membranous, 1-keeled, 3 -veined. Lower glume primary vein eciliate or ciliolate. Lower glume apex acuminate. Upper glume lanceolate, 13–17 mm long, membranous, without keels, 5 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 9–9.3 mm long, coriaceous, yellow, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs 2–3 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate, 55–60 mm long overall, with twisted column, limb ciliate, with 1.5–2 mm long hairs, glabrescent towards tip. Column of lemma awn 18–22 mm long, ciliate, with 1.5–2 mm long hairs. Palea 7–8 mm long, 2 -veined, without keels. Palea surface villous.

Flower and Fruit. Lodicules 3. Anthers 3, 5 mm long, yellow, anther tip penicillate. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

Country /Province /State. Western South America, Southern South America. Bolivia. Argentina South.
Santa Cruz.

Jarava tortuosa (E.Desv.) Penail. *Gayana, Bot.* 59(1): 33 (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 (as *Stipa*), U.Quattrocchi, *CRC World Dictionary of Grasses* (2006).

TYPE from Chile. **Basionym or Replaced Name:** *Stipa tortuosa* E.Desv., C. Gay, *Fl. Chil.* 6: 281 (1853). T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Chile, Cordilleras de Dona Ana: Gay (P holo, K).

Illustrations: None found.

Derivation (Clifford & Bostock 2007): *L. tortus*, twisted; *-osa*, abundance. With conspicuously twisted leaf-blades or awns.

Classification. Subfamily Pooideae. Tribe: Stipeae.

Habit, Vegetative Morphology. Perennial, caespitose. Butt sheaths woolly, persistent and investing base of culm, with fibrous dead sheaths. Culms erect, zigzag, 15–45 cm long, 6–8 -noded. Culm-nodes pubescent. Ligule an eciliate membrane, 1–2 mm long, lacerate, truncate. Leaf-blades convolute, 1–8 cm long, 0.5–1.5 mm wide. Leaf-blade surface ribbed, scaberulous, rough abaxially, pubescent, densely hairy, hairy adaxially.

Inflorescence. Inflorescence a panicle, embraced at base by subtending leaf. Panicle open, linear, 10–30 cm long. Spikelets solitary. Fertile spikelets pedicelled. Pedicels present, 5–50 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, subterete, 10–12 mm long, breaking up at maturity, disarticulating below each fertile floret. Floret callus evident, 1 mm long, pubescent, acute.

Glumes. Glumes persistent, similar, exceeding apex of florets, thinner than fertile lemma. Lower glume lanceolate, 10–12 mm long, 1.3 length of upper glume, membranous, without keels, 3 -veined. Lower glume apex acuminate. Upper glume lanceolate, 8–9 mm long, membranous, without keels, 3 -veined. Upper glume apex acuminate.

Florets. Fertile lemma lanceolate, subterete, 7–8 mm long, coriaceous, without keel, 5 -veined, more than 3-veined. Lemma surface villous. Lemma margins convolute, covering most of palea. Lemma hairs 2–4 mm long. Lemma apex awned, 1 -awned. Principal lemma awn geniculate or bigeniculate, 20–25 mm long overall, with twisted column. Column of lemma awn puberulous. Palea 2–3 mm long, 2 -veined, without keels.

Flower and Fruit. Lodicules 3, 1–1.5 mm long. Anthers 3. Stigmas 2. Ovary glabrous. Caryopsis with adherent pericarp, fusiform. Hilum linear.

Distribution (TDWG). Continent. South America.

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

Tarapaca, Antofagasta, Atacama, Coquimbo. Antofagasta, Atacama. Coquimbo.

Jouvea pilosa (Presl) Scribn. *Bull. Torr. Bot. Club*, 1896, 143. (1896).

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

TYPE from Mexico. **Basionym or Replaced Name:** *Brizopyrum pilosum* J. Presl, Reliq. Haenk. 1(4–5): 280 (1830)

. T:<Type of Basionym>: *fide* TROPICOS and Kew Synonymy Database: Mexico, Acapulco: Haenke.

Illustrations (Books): R.McVaugh, *Flora Nova-Galiciana* Vol.14 *Gramineae* (1983).

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. Perennial, mat forming. Stolons present. Culms prostrate, 20–40 cm long. Ligule a fringe of hairs. Leaf-blades persistent, 5–15 cm long, 2–4 mm wide, stiff. Leaf-blade surface ribbed. Dioecious.

Inflorescence. Synflorescence compound, fasciculate.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spikelets solitary.

Fertile Spikelets. Spikelets comprising 2–5 fertile florets, with a barren rhachilla extension. Spikelets of 2 or more fertile florets. Spikelets one-many-flowered - if two-flowered then both fertile or the upper sterile. Spikelets linear, thorn-like, curved, subterete, 20–40 mm long, falling entire. Spikelet callus cuneate, base obtuse. Rhachilla internodes terete, spongy and fused to embedded lemmas.

Glumes. Glumes both absent or obscure.

Florets. Fertile florets female. Fertile lemma linear, 8–11 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma margins closed except for an apical pore, covering most of palea (embracing it). Lemma apex dentate, 2 -fid. Palea hyaline, 0 -veined, without keels. Rhachilla extension glabrous (pungent).

Flower and Fruit. Lodicules absent. Anthers 3. Stigmas 2, terminally exserted. Caryopsis with adherent pericarp, linear.

Male inflorescence unlike female, a single raceme (in upper axils). Male spikelets distinct from female (lemmas free), 5–30 flowered, 15–40 mm long. Male spikelet glumes 1. Male spikelet lemma 3 -veined.

$n = 20$ (1 ref TROPICOS).

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

Country /Province /State. Mexico. Pacific Is (Mexico), Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua.

Revillagigedo Is. Baja California, Baja California Sur, Sinaloa, Sonora. Colima, Guerrero, Jalisco, Nayarit, Oaxaca. Chiapas.

Jouvea straminea Fourn. *Bull. Soc. Bot. Belg.* xv. 475 (1876).

Accepted by: R.J.Soreng et al., *Catalogue of New World 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, San Augustin: Liebermann 738 (BR holo).

Illustrations (Books): W.Burger, *Flora Costaricensis* 15, Gramineae: *Fieldiana Botany New Series* 4 (1980) (288, Fig 105), G.Harling & C.Persson, *Flora of Ecuador* (2006) (68: 9, Fig. 2 (2001)).

Derivation (Clifford & Bostock 2007): L. straw-yellow. Spikelets and attendant structures straw-colored.

Classification. Subfamily Chloridoideae. Tribe: Cynodonteae.

Habit, Vegetative Morphology. Perennial, mat forming. Stolons present. Culms prostrate, 20–40 cm long. Ligule a ciliolate membrane or a fringe of hairs. Leaf-blades deciduous at the ligule, 1.5–5 cm long, 2–3 mm wide, stiff. Leaf-blade surface ribbed. Dioecious.

Inflorescence. Synflorescence compound, fasciculate.

Inflorescence comprising only a few spikelets, comprising 1 fertile spikelets, terminal and axillary, subtended by a spatheole, embraced at base by subtending leaf. Spikelets solitary.

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, thorn-like, curved, subterete, 15–30 mm long, falling entire. Spikelet callus cuneate, base obtuse. Rhachilla internodes terete, spongy and fused to embedded lemmas.

Glumes. Glumes both absent or obscure.

Florets. Fertile florets female. Fertile lemma linear, 6–10 mm long, coriaceous, without keel, 5–7 -veined, more than 3-veined. Lemma margins closed except for an apical pore, covering most of palea (embracing it). Lemma apex dentate, 2 -fid. Palea hyaline, 0 -veined, without keels. Rhachilla extension glabrous (pungent).

Flower and Fruit. Lodicules absent. Anthers 3. Stigmas 2, terminally exserted. Caryopsis with adherent pericarp, linear.

Male inflorescence unlike female, a single raceme (in upper axils). Male spikelets distinct from female (lemmas free), 5–30 flowered, 10–40 mm long. Male spikelet glumes 2 or 1. Male spikelet lemma 3 - veined.

$2n = 20$ (1 ref TROPICOS).

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

Country /Province /State. **Mexico.** Northwest Mexico, Southwest Mexico, Southeast Mexico. **Mesoamerica, Western South America.** Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Ecuador.

Baja California Sur, Sonora. Colima, Guerrero, Jalisco, Michoacan, Nayarit, Oaxaca. Chiapas.