

New combination and new synonymy in *Piptadenia* (Fabaceae: Mimosoideae)

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ABSTRACT

Mimosa retusa Jacq. is found to be identical in several features to the species currently known as *Piptadenia flava* (Spreng. ex DC.) Benth. The transfer of *Mimosa retusa* to *Piptadenia* is based on similarities in leaflet venation determined by comparison to authentic material of *Piptadenia flava*. Importantly, neither the venation nor petiolar glands are identical to those of *Senegalia riparia* (Kunth) Britton & Rose, which was previously considered a synonym of *Mimosa retusa* by Howard. Based on morphological similarities, *Acacia plumosa* Mart. ex Colla, is now recognized to be synonymous with *Piptadenia trisperma* (Vell.) Benth. Also, the name *Mimosa trisperma* Vell. is herein lectotypified. Published on-line www.phytologia.org *Phytologia* 102(1): 1-4 (March 22, 2020). ISSN 030319430.

KEY WORDS: *Acacia* s. l., Fabaceae, Mimosoideae, new combination, new synonymy, *Piptadenia flava*, *Piptadenia retusa*, *Piptadenia trisperma*, *Senegalia riparia*.

Many difficulties remain for placement of mimosoid legume taxa in appropriate genera and assignment of names that are in accord with current concepts of nomenclature (Turland et al., 2018). The present examination represents a contribution toward a monographic treatment of the mimosoid legumes of the New World.

Piptadenia retusa (Jacq.) P. G. Ribeiro, Seigler & Ebinger, comb. nov.

A taxon originally described by Jacquin (1760) as *Mimosa retusa* is transferred to *Piptadenia* Benth. The affiliation is based primarily on distinctive features of the taxa: leaflet venation and the structure of the petiolar gland. Those of the type specimen [*N. J. Jacquin s. n.*, Colombia: “[F]rom Cartagena”, BM] were compared to authentic material of *Piptadenia flava* (Spreng. ex DC.) Benth. Because the type consists of only a portion of a leaf, there is a paucity of data available for study.

Leaflet venation of both *Piptadenia retusa* (Figure 1) and *P. flava* (Figure 2) is raised on the abaxial surface and consists of a midvein and two or three veins arising from the base of the leaflet and are sloped toward the apex of the leaflets. Typically, 3 to 5 other veins arise from the midvein and slope toward the leaflet apex. In contrast, the venation of *Senegalia riparia* (Kunth) Britton & Rose in Britton & Killip (Figure 3) is not raised except for a subcentral midvein and a weaker vein from the base. Most other venation is indistinct, but often oriented perpendicularly to the midvein.

The petiolar gland of *Piptadenia retusa* and *Piptadenia flava* is normally solitary (Ribeiro, 2017, mentions a rare occurrence of two glands), near the middle of the petiole, fused to and raised above the

petiolar groove, oblong to elliptic, 2.5--5.1 mm long, apex depressed to cup-shaped and glabrous. The petiolar glands of *Senegalia riparia*, in contrast, are usually 2, one located near the middle of the petiole, generally larger than the second, which is just below the lowermost pinna pair, sessile to subsessile, mostly oval to orbicular, 0.5--2.2 (4.0) mm across, commonly flattened to shallowly cup-shaped, glabrous.

Because the name of Jacquin (1760) is older than that of Velloso [1827 (1831)], the name for this taxon must be *Piptadenia retusa* (Jacq.) P. G. Ribeiro, Seigler & Ebinger.

Piptadenia retusa (Jacq.) P. G. Ribeiro, Seigler & Ebinger, **comb nov.** Basionym: *Mimosa retusa* Jacq., Enum. Syst. Pl., 34. 1760. *Acacia retusa* (Jacq.) R. A. Howard, J. Arnold Arbor. 54(4): 459. 1973. – **TYPE:** Colombia: “[F]rom Cartagena,” *J. N. Jacquin, s.n.* (holotype, BM). [= *Acacia flava* Spreng. ex DC., Prodr. (A. P. de Candolle) 2: 469. (Nov.) 1825; *Piptadenia flava* (Spreng. ex DC.) Benth., Trans. Linn. Soc. London 30(3): 371. 1875; *Piptadenia communis* var. *stipulacea* Benth., Fl. Brasil. (Martius) 15: 279-280. 1876; *Piptadenia leptocarpa* Rose, Contr. U.S. Natl. Herb. 1(9): 325-326. 1895; *Mimosa buceragenia* B. L. Rob., Proc. Amer. Acad. Arts 43(2): 23. 1908 [1907]; *Piptadenia stipulacea* (Benth.) Ducke, Arch. Jard. Bot. Río de Janeiro 5: 126. 1930; *Pityrocarpa flava* (Spreng. ex DC.) Brenan, Kew Bull. 10(2): 176. 1955; *Pityrocarpa stipulacea* (Benth.) Brenan, Kew Bull. 10(2): 177. 1955; *Mimosa carbonalis* A. Molina, Ceiba 18(1-2): 102-104 1974].

The imperfectly known name *Mimosa carthagenensis* Mill. based on Houstoun collections and a later plate “Carthagen in New Spain,” plate CCXCI (291) in Miller (1760: 194) was referred to *Acacia retusa* by Rudd (1976). Based on her judgement, the name *Mimosa carthagenensis* Mill. may possibly be referred to *Piptadenia retusa*.

Although a fruit was reported to be associated with the type specimen of *Mimosa retusa* and is mentioned in a later description (Jacquin, 1763), only a leaf fragment was mentioned in the original description (Jacquin, 1760; Rudd, 1976).

Piptadenia trisperma (Vell.) Benth.

In 1827, Martius sent a series of specimens to Colla in Torino, apparently for identification. Among those was a specimen bearing the name *Acacia plumosa* in Martius’ handwriting. On the reverse side of this label, the description that appears in Colla (1834) is written in Colla’s handwriting (Seigler et al., 2013). The specimen at TO has spicate inflorescences and prickles, some of which are paired at the nodes, but are also scattered along the petioles. The petiolar gland of *Piptadenia trisperma* is solitary, near the middle of the petiole, sessile, oblong, 1.8--2.5 (4.0) mm across, apex flattened to depressed, glabrous. Leaflet venation is more or less central. These characters are quite similar to those of *Piptadenia trisperma* (Vell.) Benth. (Ribeiro, 2017), which is the most likely taxonomic placement for Martius’ *Acacia plumosa*.

Piptadenia trisperma (Vell.) Benth., J. Bot. (Hooker) 4(31): 337. [Dec.] 1841. Basionym: *Mimosa trisperma* Vell., Fl. Flumin. Icon. 11: tab. 40. 1827 [29 Oct. 1831], Fl. Flumin., 440. 1881 [Latin descr.] **TYPE:** Brazil. (lectotype, designated here, Fl. Flumin. Icon. 11: tab. 40. 1827 [29 Oct. 1831], Fl. Flumin., 440. 1881 [Latin descr.]; *Acacia trisperma* (Vell.) Mart., Flora. 20(2), Beiblätter 8: 108--109. [Herb. flor. bras.] 1837. *Pityrocarpa trisperma* (Vell.) Brenan, Kew Bull. 10(2): 177. 1955. [= *Acacia plumosa* Mart. ex Colla, (Jul.) 1834.]

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Fig. 1. *Piptadenia retusa* (Jacq.) P. G. Ribeiro, Seigler & Ebinger. A. Abaxial surface of leaflet. *N. J. Jacquin s. n.* Colombia, Cartagena (BM).



Fig. 2. *Piptadenia flava* (Spreng ex DC.) Benth. Abaxial surface of leaflet. J. A. Steyermark, J. Hoyos, & B. Holst 130986. Venezuela. Nueva Esparta. Isla de Margarita. Cerro El Maco, via Santa Ana, 23 Mar 1985 (MO).

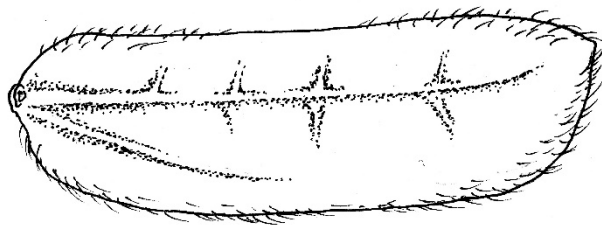


Fig. 3. *Senegalia riparia* (Kunth) Britton & Rose ex Britton & Killip. Abaxial surface of leaflet. A. Gentry, H. Cuadros & P. Keating 60597. Colombia, Bolivar. Santuario Nacional de los Colorado, Municipio San Juan Nepomuceno, 70 km SW of Cartagena. 9° 58' N 75° 10' W, 11 Jan 1988 (MO).