

## (2374–2380) Proposals to reject the names *Cestrum subsessile*, *Solanum ambrosiacum*, *S. coronatum*, *S. diantherum*, *S. jubeba*, *S. multiangulatum* and *S. perianthomega* (*Solanaceae*) from Vellozo's *Flora Fluminensis*

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The names coined by Brother José Mariano da Conceição Vellozo in the *Flora Fluminensis* (1829 [“1825”]) are accompanied by very short descriptions and the volume of plates distributed two years later (Fl. Flumin. Icon. 1831 [“1827”]) has illustrations that are sketchy and often extremely ambiguous. Vellozo (Fl. Flumin. 1829) coined names for 68 species of *Solanaceae*, some of which are still in widespread use. Others, however, are often ignored (see Pastore in Phytotaxa 108: 41. 2013), even though there is a risk they will displace other more widely used names. Sendtner (in Martius, Fl. Bras. 10: 1–228. 1846) used 61 of these names, some as accepted (17) and others in synonymy (often as questionable “?”) of his new and other names. Sampaio & Peckolt (in Arq. Mus. Nac. Rio de Janeiro 43: 333–394. 1937) produced a list of all Vellozo names and attempted to relate them to names used at the time; in general they followed Sendtner's usage, but in some cases suggested Vellozo's names should be adopted. Revising the *Solanaceae* in preparation for a treatment in the Brazilian flora, we have identified all of Vellozo's taxa (Knapp & al. in Taxon 64: 822–836. 2015) with names in current use and have found seven names that if taken up will displace names now widely used for species of the Brazilian flora. Rejection under Art. 56 with subsequent inclusion in App. V (McNeill & al. in Regnum Veg. 154. 2012; Wiersema & al. in Regnum Veg. 157. 2015) will stabilise nomenclature for the *Solanaceae* species to which Vellozo's names may refer, and prevent their destabilising use in the future.

(2374) *Cestrum subsessile* Vell., Fl. Flumin.: 102. 7 Sep–28 Nov 1829 [*Angiosp.*: *Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in Taxon 64: 825. 2015): [icon ined.] “Pent. Monog. *CESTRUM subsessile*” (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mss1198652\_011).

Sendtner (l.c.: 213) cited this name (with a question mark) in the synonymy of his *Cestrum schottii* Sendtn. Dunal (in Candolle, Prodr. 13(1): 640. 1852) followed this usage, and also listed (l.c.: 673) *C. subsessile* as “Species omnino dubiae, indescriptae”. Sampaio & Peckolt (l.c.: 346) did not even mention this name in their list. The name *C. subsessile* has not been used in any floristic treatment since its publication, and it was not mentioned (even as a synonym or dubious name) in the Lista de Espécies da Flora do Brasil (Stehmann & al., <http://floradobrasil.jbrj.gov.br/>, 6 Dec 2014). *Cestrum schottii* is considered a synonym of the widespread species *C. schlechtendalii* G. Don (Gen. Hist. 4: 482. 1838) that is distributed from Central America

to southern Brazil. *Cestrum schlechtendalii* is the currently used name for what was called *C. megalophyllum* Dunal (l.c.: 638) in older Central American floristic works (e.g., D'Arcy in Ann. Missouri Bot. Gard. 60: 606. 973; Stevens & al. in Monogr. Syst. Bot. Missouri Bot. Gard. [Fl. Nicaragua] 85: 2385. 2001); *C. schlechtendalii* is the name now used for this species in floras (e.g., Fl. Nicaragua Online <http://www.tropicos.org/name/29600607?projectid=7>; D'Arcy & Benítez de Rojas in Steyermark & al., Fl. Venez. Guayana 9: 201. 2005; Idárraga-Piedrahita & al., Fl. Antioquia, Cat. 2: 9–939. 2011; Bohs & Soto in Hammel & al., Man. Pl. Costa Rica 8. 2015) and checklists (e.g., Stehmann & al., l.c.). *Cestrum subsessile* could be distinct from this widespread species, but the quality of Vellozo's illustrations makes this difficult to determine. Correct identification of *Cestrum* species depends upon details of internal corolla structure, not well delineated by Vellozo. Use of Vellozo's name for the widespread species *C. schlechtendalii* (search string “*Cestrum schlechtendalii*” cited in 85 Google Scholar-listed papers, 25 Apr 2015) would cause considerable disruption not only in Brazil but throughout the New World tropics.

(2375) *Solanum ambrosiacum* Vell., Fl. Flumin.: 90. 7 Sep–28 Nov 1829 [*Angiosp.*: *Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in Taxon 64: 827. 2015): [icon ined.] “Pent. Monog. *SOLANUM ambrosiacum*” (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mss1198651\_134).

Sendtner (l.c.: 67) accepted *Solanum ambrosiacum*, and suggested it was related to *S. aculeatissimum* Jacq.; Nee (Revis. *Solanum* sect. *Acanthophora*, Univ. of Wisconsin. 1974) treated it as a dubious name in his doctoral dissertation. The plate in Vellozo (l.c. 1831: t. 131) corresponds most closely to the yellow-fruited *S. viarum* Dunal (l.c.: 240), a common weedy species in southern Brazil (Knapp & al., l.c.). *Solanum viarum* has been introduced to the Old World; it is common and widespread in Asia and occurs sporadically in Africa. The name has been used in monographic treatments (e.g., Nee, *Solanaceae* III: 257–267. 1993) and many floras both in the Americas (Zuloaga & al. in Monogr. Syst. Bot. Missouri Bot. Gard. 107: 3052. 2008; Chiarini in Fl. Argentina 13: 230. 2013) and in the Old World tropics (D'Arcy & Zhang in Fl. China 17: 323. 1994; Hul & Dy Phon in Fl. Camb. Laos Vietnam 35: 28. 2014). *Solanum viarum* is listed as a noxious weed for Australia (<http://www.weeds.org.au/noxious.htm>) and the United States (<http://plants.usda.gov/java/noxious>); in the U.S. it is known as tropical soda apple and is spreading rapidly (Bryson &

Byrd in Weed Technol. 21: 791–795. 2007). The name *S. ambrosiacum* is cited in 23 Google Scholar–listed publications (search string “*Solanum ambrosiacum*”, 25 Apr 2015), while *S. viarum* is used in a wide variety of publications (1290 occurrences in Google Scholar–listed publications, search string “*Solanum viarum*”, 25 Apr 2015). The name *S. ambrosiacum* has not been used in floras since Sendtner (l.c.: 67) and use of the name for this common and widespread species would cause considerable disruption not only in its native Brazil but across the Old World tropics, and to legislative frameworks for invasive plants.

(2376) *Solanum coronatum* Vell., Fl. Flumin.: 82. 7 Sep–28 Nov 1829 [Angiosp.: *Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in Taxon 64: 828–829. 2015): [icon ined.] “Pent. Monog. *SOLANUM coronatum*” (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mssl198651\_095).

Sendtner (l.c.: 38) listed *Solanum coronatum* (as questionable and with a comment as to its differences) in synonymy of his new species *S. sambuciflorum*. Dunal (l.c.: 118) and Sampaio & Peckolt (l.c.: 385) followed this usage; Sampaio & Peckolt (l.c.) mention that Vellozo’s name has priority. The name has not been used in floristic or monographic treatments since its publication. It is listed with no data in the Lista de Espécies da Flora do Brasil (Stehmann & al., l.c.). The description and illustration of *S. coronatum* in Vellozo could represent a number of species, all of which were published after 1829. Differences between Brazilian species of the *Brevantherum* clade with which *S. coronatum* could possibly be identified (i.e., *S. capoerum* Dunal, *S. rufescens* Sendtn., *S. sambuciflorum* Sendtn. or *S. sellowianum* Sendtn.) are in hair types and density, something not apparent in Vellozo’s illustration. Adopting *S. coronatum* for any of these would disrupt current usage from floras and monographic treatments (e.g., Nee in *Solanaceae* IV: 313–314. 1999; Mentz & Oliveira in *Pesquisas, Bot.* 54: 1–327. 2004).

(2377) *Solanum diantherum* Vell., Fl. Flumin.: 83. 7 Sep–28 Nov 1829 [Angiosp.: *Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in Taxon 64: 829. 2015): [icon ined.] “Pent. Monog. *SOLANUM diantherum*” (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mssl198651\_102).

Sendtner (l.c.: 37) listed *Solanum diantherum* (as questionable) in synonymy of his new species *S. concinnum*. Dunal (l.c.: 119) and Sampaio & Peckolt (l.c.: 386) followed this usage. The name *S. diantherum* has not been used since its publication, while the name *S. concinnum* has been widely used in floristic (e.g., Smith & Downs, Fl. Ilustr. Catarinense: SOLA: 121. 1966) and monographic (e.g., Mentz & Oliveira, l.c.: 69) works. *Solanum concinnum* is a common species of secondary habitats in southern and southeastern Brazil and a name change would be disadvantageous for tracking its importance in pharmacology (e.g., Braga & al. in *J. Ethnopharmacol.* 111: 396–402. 2007; Bouzada & al. in *Pharm. Biol.* 47: 44–52. 2009) and ecology (e.g., Tabarelli & al. in *Biol. Conservation* 91: 119–127. 1999; Martins & al. in *Pl. Ecol.* 172: 121–131. 2004; Carrizo-Garcia & al. in *Bot. J. Linn. Soc.* 158: 344–354. 2008; Da Silva & al. in *Zootaxa* 3681: 595–599. 2013). Usage of the name *S. concinnum* reflected in Google Scholar (50 papers, search string “*Solanum concinnum*”, 25 Apr 2015) far exceeds use of *S. diantherum* (only Lafetá in *Hoehnea* 29: 137. 2002 – where it was cited as a dubious name associated with *S. concinnum*).

(2378) *Solanum jubeba* Vell., Fl. Flumin.: 89. 7 Sep–28 Nov 1829 [Angiosp.: *Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in Taxon 64: 831. 2015): [icon ined.] “Pent. Monog. *SOLANUM jubeba*” (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mssl198651\_127).

Sendtner (l.c.: 90) treated the name *Solanum jubeba* as a synonym of his *S. insidiosum* var. *pubescens*. *Solanum juripeba* Vell. ex Steud. (*Nomencl. Bot.*, ed. 2, 2: 603. 1841), is based on the citation “*juripeba* Arrab. pycnanthemum” but no species “*S. juripeba*” occurs in Vellozo (l.c.); it is possible that this is a misprint or misinterpretation of *S. jubeba*. “Juripeba” is the common name for many spiny solanums in Brazil, but is only used by Vellozo (l.c.: 90) for his second instance of *S. bifissum* (which we equate with *S. vaillantii* Dunal, see Knapp & al. l.c.: 827). Sampaio & Peckolt (l.c.) suggested that Vellozo’s *S. jubeba* should be the accepted name for *S. insidiosum* Mart. (in *Flora* 21(2, Beibl.): 79. 1838), following Sendtner’s (l.c.: 90) usage. Chiarini (l.c.: 225) listed *S. jubeba* in the synonymy of *S. paniculatum* L., perhaps based on the common name “juripeba”; Vellozo’s plate, however, is not morphologically like *S. paniculatum* (see Knapp & al., l.c.) and differs from it in key characteristics such as bud shape and leaf venation. The name *S. insidiosum* has been in use in floras (Sendtner, l.c.: 90), monographic treatments (Agra in VIII Congr. Latinoamer.: 206. 2004), and in applied studies (e.g., Batista-Franklim & Gonçalves-Esteves in *Acta Bot. Brasil.* 22: 782–793. 2008), but is applied to a species of relatively restricted distribution. No publications are returned in Google Scholar for *S. jubeba* (search string “*Solanum jubeba*”, 25 Apr 2015); 22 Google Scholar publications use the name *S. insidiosum* (search string “*Solanum insidiosum*”, 25 Apr 2015). If the name *S. jubeba* were to be taken up for *S. insidiosum* confusion would result because of Chiarini’s (l.c.) synonymization and the widespread use of “juripeba” as a common name for *S. paniculatum* throughout Brazil.

(2379) *Solanum multiangulatum* Vell., Fl. Flumin.: 91. 7 Sep–28 Nov 1829 [Angiosp.: *Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in Taxon 64: 832. 2015): [icon ined.] “Pent. Monog. *SOLANUM multiangulatum*” (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mssl198651\_136).

Sendtner (l.c.: 65) accepted *Solanum multiangulatum* but with reservations as to its identity and the comment “Icon pessima, e quae omnia species daub hausimus” (a terrible picture, it could be anything). Dunal (l.c.: 376) listed it in his section of “Solana nomine aut iconibus pessimis solum cognita”. The name was accepted by Sampaio & Peckolt (l.c.: 386), but has not been used subsequently in either floristic (Stehmann & al., l.c.) or monographic (Whalen in *Gentes Herb.* 12: 179–282. 1984; Nee, l.c. 1999) works. Vellozo’s description and illustration are not clearly identifiable as any particular species, but from the locality information (Knapp & al., l.c.) most likely represent *S. echidnaeforme* Dunal (l.c.: 324) described in 1852. *Solanum echidnaeforme* has been used in checklists (e.g., Stehmann & al., l.c.) and is represented by unambiguous type material in G-DC. Nee (l.c. 1999) did not treat *S. echidnaeforme*. *Solanum echidnaeforme* is used in publications (e.g., Batista-Franklim & Gonçalves-Esteves, l.c.; Nurit-Silva & Agra in *Microscop. Res. Techn.* 74: 1186–1191. 2011), but we found no uses of *S. multiangulatum* in Google Scholar–listed publications (search string “*Solanum multiangulatum*”, 25 Apr 2015). *Solanum echidnaeforme* is a relatively rare and little known endemic species, but has not yet been evaluated formally for its conservation status, so a name change would affect relatively few uses. The

ambiguity of the type material of Vellozo's name, and the current usage of *S. echidnaeforme*, however, mean that adopting Vellozo's name for this distinctive species would cause confusion.

(2380) *Solanum perianthomega* Vell., Fl. Flumin.: 87. 7 Sep–28 Nov 1829 [*Angiosp.: Solan.*], nom. utique rej. prop.  
Lectotypus (vide Knapp & al. in *Taxon* 64: 833. 2015): [icon ined.] "Pent. Monog. *SOLANUM perianthomega*" (Manuscript Sect., Bibliot. Nac., Rio de Janeiro No. mss1198651\_121).

Sendtner (l.c.: 28) cited *Solanum perianthomega* as a dubious synonym of *S. megalochiton* Mart. (l.c.: 63) with this comment "non huc sed potius ad aliud genus pertinere videtur" (it cannot be this, it appears to belong to another genus). Dunal (l.c.: 386) excluded *S. perianthomega* from *Solanum* in his section "Species exclusae", but did not suggest a generic identity. Later authors Sampaio & Peckolt (l.c.: 387) followed Sendtner and cited it as a synonym of *S. megalochiton*.

Mentz & Oliveira (l.c.) did not treat *S. perianthomega* as a synonym of *S. megalochiton*. Vellozo's illustration does not represent a *Solanum* species, but instead a member of the genus *Athenaea* erected by Sendtner in 1846 (Knapp & al., l.c.: 833), and from the locality information probably *A. picta* (Mart.) Sendtn. Google Scholar searches (search string "Solanum perianthomega", 25 Apr 2015) reveal no citations of *S. perianthomega* in publications. *Athenaea picta* on the other hand (search string "Athenaea picta", 25 Apr 2015) is used in 41 Google Scholar-listed publications and has been treated in monographic (Hunziker & Barboza in *Darwiniana* 30: 95–113. 1991), floristic (Stehmann & al., l.c.) and molecular phylogenetic works (e.g., Zamberlan & al. in *Amer. J. Bot.* 99: e173–e175. 2012; Särkinen & al. in *B. M. C. Evol. Biol.* 13: 214. 2013). Neither name is in widespread use outside Brazil, but replacement of the epithet for *A. picta* by something long thought (incorrectly) to be a *Solanum* would cause disruption in a group that has just been revised using modern methods (Zamberlan & al. in *Bot. J. Linn. Soc.* 177: 322–334. 2015).