

# ON SOME BRAZILIAN PLANTS DISTRIBUTED BY MARTIUS IN 1827 AND PUBLISHED BY COLLA IN *HERBARIUM PEDEMONTANUM*—IV

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**Abstract.** In volume IV of *Herbarium Pedemontanum*, Luigi Colla cited 27 species based on Brazilian specimens distributed by Carl Martius in 1827. Of them, 22 were treated as new species. The original material examined by Colla (now held at TO) was found and compared with duplicates held elsewhere. Material was located for all but six of the taxa described by Colla. Fifteen hitherto unresolved species names are here clarified, along with fourteen new synonymies, and twelve proposed lectotypifications. Based on the collecting localities and comparison with specimens at Herbarium Martii at BR and elsewhere, at least 17 of the specimens distributed by Martius could be attributed to Prince Maximilian zu Wied.

**Resumo.** No volume IV do *Herbarium Pedemontanum*, Luigi Colla citou 27 espécies a partir de espécimes brasileiros distribuídos por Carl Friedrich Philipp von Martius em 1827. Dessas, 22 foram tratadas como espécies novas. O material original examinado por Colla (atualmente em TO) foi localizado e comparado com duplicatas depositadas em outros herbários. Com exceção de seis táxons, todos os demais tiveram seus materiais localizados. Quinze nomes de espécies que permaneciam obscuros são aqui clarificados, assim como são propostas catorze sinonímias novas e doze lectotipificações. Com base nas localidades de coleta e comparação com espécimes do Herbarium Martii em BR e de outros herbários, pelo menos 17 dos espécimes distribuídos por Martius poderiam ser atribuídos a coleções feitas pelo Príncipe Maximiliano de Wied.

**Keywords:** Brazil, *Herbarium Pedemontanum*, historical collections, Maximilian, Prince of Wied, nomenclature, taxonomy

Colla (1835b) treated 27 Brazilian species in volume IV of *Herbarium Pedemontanum*, from specimens communicated by Carl Martius in 1827, which pertain to families Apocynaceae, Bignoniaceae, Boraginaceae, Convolvulaceae, Hydroleaceae, Lamiaceae, Primulaceae, Solanaceae, Verbenaceae, and Violaceae. These specimens, and others from the same set distributed by Martius to major European herbaria, were indiscriminately attributed to Martius, either by Colla or by other authors who dealt with them (Moraes et al., 2013a, b, c, d).

As in previous papers related to *Herbarium Pedemontanum* volume I (Colla, 1833; Moraes et al., 2013a), volume II (Colla, 1834; Moraes et al., 2013b), and volume III (Colla, 1835a; Moraes et al., 2013a), Herbarium Colla at the University of Turin (TO) was searched for original specimens of species that Colla described from these Brazilian material. Specimens located at TO were compared with material at BR, GOET, LE, M, MEL, the private herbarium of Wied in Neuwied, Germany, and elsewhere.

As noted by Moraes et al. (2013a), the specimens distributed by Martius have *Herbarium Martii* labels, typically

printed with “*Communicat* .....182...,” and handwritten with “*Martius*” and “7” (i.e. “*Communicavit Martius 1827*”). In most cases, the locality is specified, but not the collector. Many authors who have worked with these collections not only attributed them to Martius, but cited them as collected in 1827. As outlined by Moraes et al. (2013a), the localities and date preclude Martius as the collector, since he collected in Brazil in 1817–1820. Although no collector is specified, many of the localities refer to places that were visited by the expedition of Maximilian Alexander Philipp, Prinz zu Wied-Neuwied (1782–1867) (since 1824: zu Wied; Roth, 2001: 139; Hannibal et al., 2009: 5; hereafter referred to as Wied), from 1815 to 1817, including “*Rio Doce*,” “*Barra de Jucu*,” “*Campos Novos*,” “*Moribeca*,” “*Regência*,” “*Tamburil and Valo*,” “*Aldea Velha*,” “*Itapemirim*,” “*Rio Belmonte*,” “*Minasstrasse*” [“*Estrada de Minas*”] or “*via Felisbertia*,” “*Mucuri*,” “*Villa Nova de Almeida*,” “*Pedra d’Agoa*,” etc. No other collector is documented as having collected in these areas before 1827. Furthermore, in most cases, the duplicates distributed by Martius closely match specimens at BR, GOET, and MEL that have original Wied labels.

Our thanks to Sue Frisby (K), Cécile Aupic and Elodie Lerat (P) for sending images of specimens. P.L.R. de Moraes is supported by a grant (PQ2) from CNPq, and is grateful for the sponsorship received by the CAPES/DAAD Agreement for the year 2008; a grant of FUNDUNESP (Proc. Nr. 00073/11-DFP), for his visit to MEL; a stipend from the *Belgian Focal Point to the Global Taxonomy Initiative (GTI)*, which supported the visit to the *National Botanic Garden of Belgium* in 2012; and a sponsorship from CNPq (Proc. 450515/2013-3) for the visit to LE.

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The majority of the specimens that Martius sent to Colla can thus be confirmed as Wied specimens.

Since Colla only mentions that specimens were received from Martius, and since his annotations are often somewhat incomplete (and sometimes include misleading information), it is uncertain whether Colla examined only the material that is still at TO; it's possible that he examined other specimens that have since been exchanged with other herbaria or lost.

BRAZILIAN SPECIES IN VOLUME IV OF *HERBARIUM PEDEMONTANUM*

APOCYNACEAE

*Allamanda puberula* A. DC., Prodr. 8: 319. 1844. TYPE: BRAZIL. Bahia, Barra, "Villa di Barra," 1837, *Blanchet* 2662 (Holotype: G-DC 00143344 [F neg. 7523]; Isotypes: E 00259730, G 00169221, HAL 0114138, LE, P 04208583, P 04208588). Other specimens: BRAZIL. Bahia, Inhobim, "Barra da Vareda," January 1817, *M. A. P., Prinz zu Wied s.n.* (Schrader nr. 42; Nees von Esenbeck nr. 42) (BR 0000006589707, BR 0000006589370, GOET [2 sheets], LE, MEL 2353790); BRAZIL. Loco haud indicato, s.d., *Anonymous s.n.* (K 000587518 [Kew neg. 18003]).

non *Allamanda verticillata* Desf., Tabl. Bot. Par., ed. 2, 93. 1815, fide Colla, Herb. Pedem. 4: 136. 1835.

Although the specimen at TO has not been located, the one at K has an original *Herbarium Martii* label communicated by Martius in 1827, and is annotated with "*Allamanda verticillata* / Brasilia" like what has been quoted by Colla. For further information on Blanchet's collections, see Hind (1999).

*Geissospermum laeve* (Vell.) Miers, Apocyn. S. Amer. 84. 1878 = *Tabernaemontana laevis* Vell., Fl. Flumin. 105. 1829; idem in Fl. Flumin. Icon. 3: t. 18. 1831; idem in Arch. Mus. Nac. Rio de Janeiro 5: 100. 1881. LECTOTYPE (designated here): [icon] original plate on parchment of "*Florae Fluminensis*" in the Manuscript Section of the Biblioteca Nacional of Rio de Janeiro (mss1198652\_021).

Synonym: '*Tabernaemontana cymosa* Mart. ex Miers', Apocyn. S. Amer. 84. 1878, *nom. invalid.* = *Geissospermum martianum* Miers, Apocyn. S. Amer. 84. 1878. TYPE: BRAZIL. Rio de Janeiro/São Paulo ?, Rio Paraíba, "Paraíba," s.d., *Anonymous* [Martius ?] s.n. (Holotype: BM; Isotypes: K 000582551, TO). non *Tabernaemontana cymosa* Jacq., Enum. Syst. Pl. 14. 1760, fide Colla, Herb. Pedem. 4: 134. 1835.

As the name *Tabernaemontana laevis* Vell. was validly published in *Florae Fluminensis* (Vellozo, 1829), its plate published in *Florae Fluminensis Icones* (Vellozo, 1831) does not qualify as lectotype under Art. 9.3 of the ICN (McNeill et al., 2012). An original unpublished plate of *Tabernaemontana laevis* Vell. from the *Florae Fluminensis* is currently kept at the Biblioteca Nacional of Rio de Janeiro and is here designated as a lectotype. "Paraíba" as indicated on the labels of "*Tabernaemontana cymosa* Mart." may refer to the region of Rio Paraíba, on the border os states of São Paulo and Rio de Janeiro, where Martius has passed during his expedition with Spix. It could be related to the Wied expedition too, who is known to have collected at least 19

As such, specimens located at TO have been designated as lectotypes, rather than treated as holotypes.

Accepted names appear in boldface italics, with synonyms in italics. Full synonymies are not included as they can be found elsewhere. The symbol "≡" indicates homotypic synonyms. In the present work, 15 of Colla's names that remained unresolved to date are here clarified, and 17 of those specimens could be attributed to Wied.

species in Rio Paraíba, Rio de Janeiro, although no material collected by him for the present taxon has been located so far (Moraes et al., 2013d).

BIGNONIACEAE

*Bignonia campanulata* Cham., Linnaea 7: 711. 1832 = *Cuspidaria campanulata* (Cham.) DC., Prodr. 9: 179. 1845 = *Clytostoma campanulatum* (Cham.) Bureau & K.Schum., Fl. Bras. 8(2): 148. 1896. TYPE: BRAZIL. Rio de Janeiro/Espírito Santo, "Campos-Vittoria," 1815, *F. Sellow* 182 (Holotype: LE; Isotypes: B<sup>†</sup> [F negative 18434], BR 000000803290, K 000449438, K 000449439, NY 00313138, US 00067938).

Synonyms: *Bignonia auriculigera* Mart. ex Colla, Herb. Pedem. 4: 184. 1835, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Rio de Janeiro/Espírito Santo, Itabapuaana, November 1815, *M. A. P., Prinz zu Wied s.n.* (Schrader Bignon. No. XXVI) (TO; Isolectotypes: GOET, LE, MEL 2353890).

*Pithecoctenium tenuiflorum* Mart. ex DC., Prodr. 9: 197. 1845. TYPE. BRAZIL. São Paulo, "ad fluv. Paraíba," s.d., *C. F. P. von Martius s.n.* (Holotype: BR 0000008803610, BR 0000008802989, BR 0000008803948; Isotype: G-DC 00133582 [fragment]).

Sellow's holotype of *Bignonia campanulata* was collected in his itinerary II, when he accompanied Wied and Freyreiss from 1815 to 1817 (see Moraes, 2008). The Wied collection from Itabapuaana at GOET was identified by Hallier f. as *Bignonia capreolata* L., whereas the specimen at LE was annotated by K. Schumann as belonging to *Clytostoma noterophilum* (Mart. ex DC.) Bureau & K. Schum. Another Wied collection at LE (Schrader Bignon. No. XXIX) was also annotated by K. Schumann as "*C. noterophilum*," which belongs to this taxon, indeed (= *Bignonia binata* Thunb.). Wied collected at least five species that was clearly indicated as being from the Itabapuaana region (Moraes et al., 2013d).

BORAGINACEAE

*Heliotropium angiospermum* Murray, Prodr. Stirp. Gött. 217. 1770. TYPE: "Semina huius misit a. 1768. cel. Oeder" (GOET ?, unlocated).

Synonyms: *Heliotropium longespdatum* Mart. ex Colla, Herb. Pedem. 4: 227. 1835. Lectotype (designated by Förther, 1998: 204, as "Holotypus"): BRAZIL. Bahia, "via Felisbertia," s.d., *M. A. P., Prinz zu Wied s.n.* (92) (TO; Isolectotypes: BM 000992033, BR 0000005198245, BR 0000005199235, K, LE).

*Heliohyptis odorum* Fresen. in Martius, Fl. Bras. 8(1): 45. 1857 = *Heliotropium odorum* (Fresen.) Gürke in Engl. & Prantl., Natürl. Pflanzenfam. 4(3): 96. 1893, *nom. illegit.* = *Heliotropium fragrans* J.F. Macbr., Proc. Amer. Acad. Arts 11: 541. 1916. Lectotype (designated by Förther, 1998: 232): BRAZIL. Bahia, “in Campo,” March 1817, *M. A. P., Prinz zu Wied s.n.* (73) (BR 0000006966546; Isolectotype: M 0153332 [F neg. 20312]).

Further synonyms in Förther (1998).

“Via Felisbertia” in Bahia, or “Minas Strasse” (“Estrada de Minas”) is a region explored by Wied and his party, and commonly included on specimens’ labels (see Moraes, 2011, Moraes et al., 2013a, d). Wied collected about 166 species that clearly have been indicated as from that region (Moraes et al., 2013d).

*Heliotropium filiforme* Lehm., Gött. Gel. Anz. 1817: 1515. 1817. Lectotype (designated by Förther, 1998: 195): VENEZUELA. “ad Orinocum,” s.d., *F. W. H. A. von Humboldt 1202* (B-W 03246 -01 0, B-W 03246 -00 0; Isolectotypes: MEL 233288 n.v., P 00610174, P 00670717). Other specimens: BRAZIL. Bahia, Rio Jequitinhonha, “Rio Belmonte,” 1816, *M. A. P., Prinz zu Wied s.n.* (59 & 68) (BR 0000005198900, BR 0000005198580); BRAZIL. Espírito Santo: “am Rio Doce bey Regencia,” April 1816 [sic], *M. A. P., Prinz zu Wied s.n.* (Schrader [asperif.] 43) (BR 0000005197934).

Synonyms: *Heliotropium littorale* Mart. ex Colla, Herb. Pedem. 4: 226. 1835. Lectotype (designated by Förther, 1998: 204, as “Holotypus”): BRAZIL. Loco haud indicato, “in arenosis maritimis,” s.d., *Anonymous s.n.* (TO; Isolectotype: BM).

*Heliotropium pusillum* Colla, Herb. Pedem. 4: 227. 1835. Lectotype (designated by Förther, 1998: 215, as “Holotypus”): BRAZIL. Loco haud indicato, s.d., *Anonymous* [Martius ?] *s.n.* (TO).

Further synonyms in Förther (1998).

*Heliotropium indicum* L., Sp. Pl. 1: 130. 1753. Lectotype (designated by Mill in Cafferty and Jarvis, 2004: 802): SRI LANKA. Herb. Hermann 1: 9, no. 70 a (BM 00061256).

Synonym: *Heliotropium scorpiurus* Colla, Herb. Pedem. 4: 226. 1835. Lectotype (designated by Förther, 1998: 218, as “Holotypus”): BRAZIL. Rio de Janeiro/São Paulo ?, Rio Paraíba, “Paraíba,” s.d., *Anonymous* [Martius ?] *s.n.* (TO).

Further synonyms in Förther (1998).

*Heliotropium procumbens* Mill., Gard. Dict. (ed. 8) no. 10. 1768. TYPE: COLOMBIA. Cartagena, s.d., *W. Houstoun s.n.* (Holotype: BM 000953065).

Synonym: *Heliotropium riparium* Mart. ex Colla, Herb. Pedem. 4: 226. 1835. Lectotype (designated by Förther, 1998: 216, as “Holotypus”): BRAZIL. Bahia, Rio Jequitinhonha, “Rio Belmonte,” s.d., *Anonymous* [Wied] *s.n.* (TO; Isolectotypes: BM, K).

Further synonyms in Förther (1998).

“Rio Belmonte” or “Rio Grande de Belmonte” is a well-documented collecting locality visited by the Wied expedition, but never by Martius. Wied is known to have collected at least 105 species from that region (Moraes et al., 2013d).

#### CONVOLVULACEAE

*Evolvulus imbricatus* Mart. ex Colla, Herb. Pedem. 4: 207. 1835 = ‘*Evolvulus imbricatus* Mart. ex Choisy’, Mém. Soc. Phys. Genève 8: 72. 1837, *syn. nov.*, *nom. invalid.* LECTOTYPE (designated here): BRAZIL. Bahia, Rio Jequitinhonha, “Rio Belmonte,” s.d., *Anonymous* [Wied] *s.n.* (TO; Isolectotype: K 000945694).

Synonym: *Evolvulus maximilianii* Mart. ex Choisy in DC., Prodr. 9: 444. 1845, *syn. nov.*; Meissner in Martius, Fl. Bras. 7: 356, t. 124. 1869. TYPE: BRAZIL. Bahia, Mucuri, “prope Villa de Porto Alegre,” March [May] 1816, *M. A. P., Prinz zu Wied s.n.* (457; Schrader (asperif.) nr. 44) (Syntypes: B<sup>1</sup>, BR 0000006588892, BR 0000006588857, GOET 000811, GOET 000812 (Mucuri, May 1816; Schrader nr. 44), GOET 000813 (idem), MEL 2353844, MEL 2353845, RB 00538240).

The name published by Colla is the oldest available for the taxon currently but incorrectly known as *E. maximilianii*.

*Evolvulus martii* Colla, Herb. Pedem. 4: 207. 1835, non *Evolvulus martii* Meisn. in Martius, Fl. Bras. 7: 337, t. 121, fig. 1. 1869, *nom. illegit.* = *Evolvulus villosus* Nees & Mart. in Wied-Neuwied, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 11: 80. 1823, *syn. nov.*, non *Evolvulus villosus* Ruiz & Pav., Fl. Peruv. 3: 30, t. 253, fig. B. 1802 = *Evolvulus tenuis* Mart. ex Choisy var. *obtusatus* Meisn. in Martius, Fl. Bras. 7: 346, t. 122, fig. 2. 1869, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Bahia, Fazenda de Tamburil and Quartel Geral do Valo, “circa Tamburil et Valos inter frutices,” February 1817, *M. A. P., Prinz zu Wied s.n.* (TO [Fig. 1]; Isolectotypes: BR 0000006587901, BR 0000006588229, BR 0000006587567 [Nees von Esenbeck nr. LXXVI; with label “*E. villosus* Rz Pav.” and not annotated by Meissner; Fig. 2], MEL 2353846 (Nees von Esenbeck nr. LXXVI), BR 0000006587895 [LXXVI; annotated as “*Evolvulus villosus*, Ruiz et Pav. et N. et M. Neov. p. 80” and not annotated by Meissner]).

Synonym: *Evolvulus tenuis* Mart. ex Choisy, Mém. Soc. Phys. Genève 8: 78. 1837, *syn. nov.*; idem in Convolv. Diss. Sec. (Conv. Rar.) 156. 1837. TYPE: BRAZIL. Espírito Santo, Rio Doce, s.d., *Anonymous* [Wied] *s.n.* (Holotype: K 000613094).

Meissner (Fl. Bras. 7: 344) cited the work by Nees & Martius under *Evolvulus villosus* Ruiz & Pav. and indicated “circa Tamburil et Valos...: Princ. Neuwied” under the examined material. In his treatment of *E. tenuis* var. *obtusatus*, he repeated the work by Nees & Martius and also indicated “*Evolvulus villosus* Nees & Mart. in Herb. Ac. Monac.!” (unloc.) and “inter frutices ad Tamburil et Valos...: Princ. Neuwied,” in the examined material. The type of *Evolvulus tenuis* cannot be attributed to Martius since he never visited the region of Rio Doce.



FIGURE 1. Lectotype of *Evolvulus martii* Colla, collected by Wied (specimen TO). Photograph courtesy of Università degli Studi di Torino, Dipartimento di Scienze della Vita e Biologia dei Sistemi.



FIGURE 2. Isolectotype of *Evolvulus martii* Colla, collected by Wied (specimen BR). Photograph courtesy of National Botanic Garden of Belgium, Dept. Spermatophyta-Pteridophyta.

## HYDROLEACEAE

*Hydrolea spinosa* L., Sp. Pl. (ed. 2) 1: 328. 1762; Colla (1835: 213) = *Nama spinosa* (L.) Kuntze, Revis. Gen. Pl. 2: 435. 1891. Neotype (designated by Barrie in Jarvis et al., 1993: 55): VENEZUELA. Merida, "Chama in paludosis," November 1865, *J. W. K. Moritz 1297* (BM 000648925; Isonotypes: CAS 0002978, K 000632556). Other specimens: BRAZIL. Rio de Janeiro, Cabo Frio, s.d., *Anonymous* [Wied] s.n. (TO); BRAZIL. Bahia, Rio Jequitinhonha, "Rio Belmonte," August–September 1816, *M. A. P., Prinz zu Wied s.n.* (58) (BR0000013066918, BR0000013066925, BR0000013066932).

## LAMIACEAE

*Marsypianthes chamaedrys* (Vahl) Kuntze, Revis. Gen. Pl. 2: 524. 1891 = *Clinopodium chamaedrys* Vahl, Symb. Bot. 3: 77. 1795 = *Hyptis chamaedrys* (Vahl) Willd., Sp. Pl. (ed. 4) 3(1): 85. 1800 = *Marsypianthes hyptoides* Mart. ex Benth., Labiat. Gen. Spec. 64. 1833, *nom. illegit. superfl.*; Schmidt in Martius, Fl. Bras. 8(1): 78. 1858. TYPE: GUIANA. Loco haud indicato, s.d., *Anonymous s.n.* (Syntype: C 10013111). Other specimens: BRAZIL. Bahia, Nova Viçosa, "Vila Viçosa," June 1816, *M. A. P., Prinz zu Wied s.n.* (36; 454) (BR 0000013326258, BR 0000013326265, LE).

Synonym: *Hyptis psammophila* Mart. ex Colla, Herb. Pedem. 4: 443. 1835, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Bahia, Ilhéus, "ad fluv. Ilheos," s.d., *Anonymous s.n.* (TO; Isolectotypes: E 00265479, K).

Collections from River Ilhéus can be attributed either to Martius or to Wied, since both visited that region.

*Salvia fruticetorum* Benth., Labiat. Gen. Spec. 284 (1833); Schmidt in Martius, Fl. Bras. 8(1): 194. 1858.

TYPE: BRAZIL. Bahia, Vitória da Conquista, "prope Arrayal da Conquista," March 1817, *M. A. P., Prinz zu Wied s.n.* (Holotype: BR 0000006592660; Isotype: K 000479454).

Synonym: *Salvia hevanda* Mart. ex Colla, Herb. Pedem. 4: 398. 1835, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Espírito Santo, Rio Doce, s.d., *Anonymous* [Wied] s.n. (TO).

## PRIMULACEAE

*Ardisia guianensis* (Aubl.) Mez, Symb. Antill. (Urban) 2(3): 392. 1901 = *Icacorea guianensis* Aubl., Hist. Pl. Guiane 2(Suppl.): 1, t. 368. 1775 = *Tinus guianensis* (Aubl.) Kuntze, Revis. Gen. Pl. 2: 973. 1891. TYPE: FRENCH GUIANA. "Habitat in campis cultis propè Comitatum de Gêne," s.d., *J. B. C. F. Aublet s.n.* (BM 000027537).

Synonyms: *Wallenia angustifolia* Nees & Mart. in Wied-Neuwied, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 11: 87. 1823 = *Cybianthus principis* A. DC., Trans. Linn. Soc. London 17: 104. 1834 = *Icacorea principis* (A. DC.) A. DC., Prodr. 8: 118, 120. 1844 = *Ardisia semicrenata* Mart. var. *angustissima* (Nees & Mart.) Miq., Fl. Bras. 10: 283, t. 29, fig. 3. 1862 = *Tinus angustifolia* (Nees & Mart.) Kuntze,

Revis. Gen. Pl. 2: 973. 1891 = *Ardisia angustifolia* (Nees & Mart.) Mez, Pflanzenr. IV. 236 (Heft 9): 94. 1902, *nom. illegit.*, non *Ardisia angustifolia* A. DC., Prodr. 8: 134. 1844 = *Icacorea angustifolia* (Mez) Lundell, Phytologia 56(1): 20. 1984. TYPE: BRAZIL. Bahia, "ad ripas fluminis Ilhéos et ad vicum R. da Caxuera" [Cachoeira], December 1816, *M. A. P., Prinz zu Wied s.n.* (BR 0000005175000, BR 0000005174997, LD). Other specimens: BRAZIL. *Martius Obs. 2133* (M [F negative 20055]); BRAZIL. Espírito Santo, "Rio Doce," s.d., *Anonymous* [Wied] s.n. (TO).

non *Ardisia parasitica* Sw., Prodr. 48. 1788, fide Colla, Herb. Pedem. 4: 96. 1835.

Although no Wied collection from Rio Doce has been located for the present taxon, this toponym is typical of his expedition.

*Myrsine guianensis* (Aubl.) Kuntze, Revis. Gen. Pl. 2: 402. 1891 = *Rapanea guianensis* Aubl., Hist. Pl. Guiane 1: 121; 3: t. 46. 1775. Lectotype (designated by Gillis; see Howard, 1983: 282): FRENCH GUIANA, *J. B. C. F. Aublet s.n.* (P-JJR 6: 203; Isolectotype: BM 000027538).

Synonyms: *Myrsine ovalifolia* Miq., Fl. Bras. 10: 313, t. 57. 1862, *nom. illegit.*, non *Myrsine ovalifolia* D. Dietr., Syn. Pl. 1: 619. 1839 = *Rapanea ovalifolia* (Miq.) Mez, Pflanzenr. IV. 236 (Heft 9): 391. 1902 = *Myrsine brasiliensis* Mart. ex Colla, Herb. Pedem. 4: 95. 1835, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Espírito Santo, Aracruz, "ad Aldea Velha," March 1816 (sic), *M. A. P., Prinz zu Wied s.n.* (BR 0000005849437; Isolectotypes: TO, U 0249300).

The specimen at TO bears a *Herbarium Martii* label annotated with "Villa [sic] Velha" for which Colla has quoted "Valho." As indicated by Moraes et al. (2013a, d), Wied is known to have collected at least 15 species at the region of Aracruz.

## SOLANACEAE

*Physalis angulata* L., Sp. Pl. 1: 183. 1753; Sendtner in Martius, Fl. Bras. 10: 130. 1846. Lectotype (designated by D'Arcy, 1974: 662): "Habitat in India utraque," Herb. Linn. No. 247.9 (LINN).

Synonym: *Physalis glaberrima* Colla, Herb. Pedem. 4: 279. 1835, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Espírito Santo, Rio Doce, "in arenosis ad stagna, inter fluvios Rio Doce et S. Mathaeus," April 1816 [sic] (December 1815), *M. A. P., Prinz zu Wied s.n.* (Nees von Esenbeck nr. IV) (TO; Isolectotypes: BR 0000005575084, BR 0000005575411).

Sendtner (1846) cited the Wied collection under *Physalis angulata*. The specimen at TO is annotated with "Rio Doce" and matches the original material with original label by Wied at BR.

*Physalis pubescens* L., Sp. Pl. 1: 183. 1753. Lectotype (designated by Waterfall, 1958: 165): "Habitat in India utraque," Herb. Linn. No. 247.11 (LINN).

Synonyms: *Physalis heterophylla* Colla, Herb. Pedem. 4: 279. 1835, **syn. nov.**, *nom. illegit.*, non *Physalis heterophylla* Nees, Linnaea 6(3): 463. 1831. LECTOTYPE (designated here): BRAZIL. Amazonas ?, “Barra de Coara” [sic; Coari], s.d., *Anonymous* [Martius ?] s.n. (TO).

*Physalis neesiana* Sendtn. in Martius, Fl. Bras. 10: 131. 1846; Martínez (1998: 106). Lectotype (designated by Moraes in Moraes et al., 2013d: 192): BRAZIL. Bahia, Rio Jequitinhonha, “R.[io] B.[elmonte],” 1816, *M. A. P., Prinz zu Wied s.n.* (Menke nr. 128; Nees von Esenbeck nr. 26) (BR 0000006587666; Isolectotypes: BR 0000006588977, OKLA 97848 [fragment. ex BR], and probably TO [*Anonymous s.n.*; “*Brasilia*”]).

The specimen of *Physalis heterophylla* at TO is annotated with “Barra de Coara,” which may refer to “Coari” in Amazonas, a place visited by Martius. Another specimen at TO, which is annotated with “Physalis / Brasilia,” matches the original material of *Physalis neesiana* at BR.

*Solanum melissarum* Bohs, Taxon 44: 584. 1995 = *Witheringia divaricata* Mart., Nov. Gen. Sp. Pl. 3: 75. 1829 = *Cyphomandra divaricata* (Mart.) Sendtn., Flora 28: 174, t. 9, fig. 1–6. 1845; idem in Martius, Fl. Bras. 10: 118. 1846 = *Pionandra divaricata* (Mart.) Miers, London J. Bot. 4: 361. 1845. Lectotype (designated by Bohs, 1994: 74): BRAZIL. São Paulo, “in montosis sylvaticis ubi a Mineiros ad Lorenam descenditur, Provinciae S. Pauli,” December 1817, *C. F. P. von Martius s.n.* (M 0172094); BRAZIL. São Paulo, loco haud indicato, s.d., *C. F. P. von Martius s.n.* (Syntypes: M 0172092 [F neg. 6517], M 0172093). Other specimens: BRAZIL. Espírito Santo, “in arbustis prope Itapemirim,” December 1815, *M. A. P., Prinz zu Wied s.n.* (Klaenze nr. 134; Nees von Esenbeck nr. 21) (BR 0000006588984, GOET).

Synonyms: *Pionandra capsicoides* Miers, London J. Bot. 4: 360. 1845 = *Cyphomandra capsicoides* (Miers) Walpers, Repert. Bot. Syst. 6: 579. 1847. Lectotype (designated by Bohs, 1994: 74): BRAZIL. Rio de Janeiro, Cabo Frio, s.d., *Anonymous* [Wied] s.n. (BM 000778031; Isolectotype: K 000585806).

*Witheringia capsicoides* Mart. ex Colla, Herb. Pedem. 4: 277. 1835, **syn. nov.** TYPE: BRAZIL. Minas Gerais, Ouro Preto, “Villa Ricca,” s.d., *Anonymous* [Martius] s.n. (BM 000778013; also syntype of *Pionandra capsicoides* Miers).

Although no specimen of *Witheringia capsicoides* Mart. has been located at TO, Colla indicated a collection from “Villanova.” The specimen at BM, from Herbarium Miers, bears an original Herbarium Martii label (though cut, preserving only Martius’s annotation), which is annotated with “*Witheringia capsicoides* Mart. / Villa Ricca Brasil.” (being not so easy to decipher). It is possible that Colla mistakenly interpreted “Villa Ricca” as “Villa Nova,” like what has been found in other cases (see Moraes et al., 2013b).

#### VERBENACEAE

*Lippia brasiliensis* (Link) T.R.S. Silva, Darwiniana 40(1–4): 58. 2002 = *Lantana brasiliensis* Link, Enum. Hort. Berol. Alt. 2: 126. 1822; Schauer in Martius, Fl. Bras. 9: 253, t. 43. 1851 = *Camara brasiliensis* (Link) Kuntze, Revis. Gen. Pl. 2: 504. 1891. Neotype (designated by Silva, 2001: 1115): BRAZIL. São Paulo, São Paulo, Parque do Estado (Água Funda), 11 December 1930, *F. C. Hoehne s.n.* (SPF 10380; Isoneotypes: K, MBM 254491, NY 00452405, RB 364222). Synonym: *Lantana longifolia* Mart. ex Colla, Herb. Pedem. 4: 497. 1835. Lectotype (designated by Silva and Salimena, 2002: 58, as “holotipo”): BRAZIL. Bahia, “ad viam novam Felisberti prope S. Petrum d’Alcantara” [“Estrada de Minas”], s.d., *M. A. P., Prinz zu Wied s.n.* (82) (TO; Isolectotypes: BM 000992645, BR 0000006587703, BR 0000006588038, G, K 000470760).

Further synonyms in Silva and Salimena (2002).

The “Estrada de Minas” annotated on label of the specimens at K and TO, quoted by Colla, in the present case is undoubtedly another case related to the “via Felisbertia” which is often indicated on original labels by Wied (see Moraes et al., 2013a, b, c, d).

*Lippia maximilianii* (Schauer) T.R.S. Silva, Darwiniana 40(1–4): 58. 2002 = *Lantana mollis* Colla, Herb. Pedem. 4: 498. 1835, **syn. nov.**, *nom. illegit.*, non *Lantana mollis* Graham, Edinburgh New Philos. J. 7: 184. 1829 = *Lantana maximilianii* Schauer, Prodr. (DC.) 11: 595. 1847; idem in Martius, Fl. Bras. 9: 252. 1851 = *Camara maximilianii* (Schauer) Kuntze, Revis. Gen. Pl. 2: 504. 1891. Lectotype (designated by Silva, 2001: 58, as “holotipo, BR”); second-step lectotype designated by Moraes et al., 2013d: 202): BRAZIL. Bahia, Inhobim, “in silvis caeduis ad Barra de Varedas,” February 1817, *M. A. P., Prinz zu Wied s.n.* (94) (BR 0000006588045; Isolectotypes: BR 0000006587710, NY 00137661).

No specimen of *Lantana mollis* Colla has been located at TO. However, its protologue agrees with the description of *Lantana maximilianii* Schauer, and also the collecting locality which was wrongly indicated by Colla as “Barra de Vara.” Specimen G 00366465 (and also P 03608780) bears a label of *Martii Herbar. Florae Brasil. No. 1032* annotated with “*Lippia mollis* var. / undulata Schr. / ex h. DC.” and a label annotated anonymously with “Typus / *Lantana mollis* Cola Herb. Pedemontanum IV: 498. 1835.” *Martii Herbar. Florae Brasil. No. 1032* is a collection by *A. L. P. da Silva Manso* 226, collected in Cuiabá, Mato Grosso (BR 0000005571987, BR 0000005571666) which, according to Moldenke (1978: 455), belongs to *Lippia salviaeifolia* Cham. However, specimen at G 00366465 belongs to *Lantana undulata* Schrank, and most likely is a duplicate of *Martii Herbar. Florae Brasil. No. 1031*, communicated by *B. Luschnath s.n.*, from Ilhéus, Bahia, on 15 May (Syntype: BR 0000005504305), or *B. Luschnath* 1031, on 25 May 1837 (Syntypes: BR 0000005504633, BR 0000005504947, BR 0000005504985, BR 0000005504619).

*Lantana camara* L., Sp. Pl. 2: 627. 1753; Schauer in Martius, Fl. Bras. 9: 255. 1851. Lectotype (designated by Moldenke and Moldenke, 1983: 220; conserved type proposed by Jarvis in Taxon 41: 564. 1992): "Habitat in America caliodore," Herb. Linn. No. 783.4 (LINN). Other specimens: BRAZIL. Rio de Janeiro, "ad Moribeca" [Fazenda de Muribeca], November 1815, *M. A. P., Prinz zu Wied s.n.* (100) (BR 0000006589028, BR 0000006588694).

Although no specimen has been located at TO, Colla (1835b: 498) described an unnamed species of *Lantana* from "Moriba," which most likely refers to the material collected by Wied in "Moribeca," deposited at BR.

#### VIOLACEAE

*Hybanthus calceolaria* (L.) Oken, Allg. Naturgesch. 3(2): 1376. 1841 = *Viola calceolaria* L., Sp. Pl. (ed. 2) 2: 1327. 1763 = *Ionidium calceolaria* (L.) Vent., Jard. Malmaison 1: sub t. 27. 1803 = *Hybanthus calceolaria* (L.) Schulze-Menz,

Notizbl. Bot. Gart. Berlin-Dahlem 12(111): 114. 1934, *nom. illegit.* Neotype (designated by Dorr and Wiersema, 2010: 1576; see also Paula-Souza, 2011): VENEZUELA. Guárico, between El Sombrero and Palenque, 20 July 1940, *C. E. Chardon 115* (US 01049569).

Synonyms: *Calceolaria aurea* Mart. ex Colla, Herb. Pedem. 4: 331. 1835, *syn. nov.* LECTOTYPE (designated here): BRAZIL. Bahia, Mucuri, "a Rio Mucuri, in arenosis," 1816, *M. A. P., Prinz zu Wied s.n.* (TO; Isolectotypes: LE, MEL 2341138). Other specimens: BRAZIL. Loco haud indicato, "in umbrosis," 1816, *M. A. P., Prinz zu Wied s.n.* (97) (BR 0000005573226, BR 0000005573554, MEL 2341141, MEL 2341142). non *Ionidium ipecacuanha* (L.) Vent., Jard. Malmaison 1: sub t. 27. 1803, fide Nees & Martius in Wied-Neuwied, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 12: 48 (1824); Eichler in Martius, Fl. Bras. 13(1): 363. 1871.

#### STATUS UNRESOLVED

#### ACANTHACEAE

*Ruellia villanovensis* Colla, Herb. Pedem. 4: 507. 1835. LECTOTYPE (designated here): BRAZIL. Bahia (?), Olivença (?), "Villa Nova," s.d., *Anonymous* [Wied ?] *s.n.* (TO).

"Villa Nova" or "Villa Nova de Olivença" most likely refers to the current municipality of Olivença, in Bahia, which is another well-documented collecting locality of the Wied expedition (see Moraes, 2009; Moraes et al., 2013d). Wied is known to have collected nine species from Olivença (Moraes et al., 2013d). However, as indicated by Moraes et al. (2013b, c), it could also refer to "Villa Nova de Almeida" (current Nova Almeida, ES), where Wied is known to have collected 27 species (Moraes et al., 2013d), with this locality clearly being indicated on original labels. Less probable localities would be "Villa Nova do Príncipe" (current Caetitê, Bahia), or "Villa Nova da Rainha" (current Senhor do Bonfim, Bahia), places visited by the Spix and Martius expedition, which are usually indicated in full on the labels, but not as simply "Villa Nova." The specimen at TO resembles another gathering by Wied from Ilhéus [December 1816, *M. A. P., Prinz zu Wied s.n.* (Nees von Esenbeck nr. XC; Klaenze nr. 104)], which is deposited in GOET, and that has been annotated by Dieter Wasshausen with "*Ruellia* sp.."

#### APOCYNACEAE

? *Echites ovata* Mart. ex Colla, Herb. Pedem. 4: 130. 1835. LECTOTYPE (designated here): BRAZIL. [Bahia ?], "In sylvis catingas," s.d., *Anonymous* [Wied ?] *s.n.* (TO).

The specimen at TO is sterile as indicated by Colla and does not match any of the Apocynaceae material known to date to be collected by Wied. "In sylvis catingas" is usually indicated on original labels by Wied in the last months of the expedition (March to April 1817) through the region of Vitória da Conquista to Salvador, Bahia. However, Martius has also indicated the same for his collections in Minas Gerais and Bahia. Specimen at BR 0000005188635 is a Wied

collection annotated with "in sylvis catingas" [caatinga], but it belongs to *Mandevilla scabra* (Hoffmanns. ex Roem. & Schult.) K.Schum., Nat. Pflanzenfam. 4(2): 171. 1895, which is not the case of *E. ovata* Colla.

No specimens have been located at TO for the following three names:

*Convolvulus mucurensis* Colla, Herb. Pedem. 4: 205. 1835. TYPE. BRAZIL. Bahia, Mucuri, s.d., *Anonymous s.n.* (unlocated).

Mucuri is a well-documented collecting locality visited by Wied, but never by Martius. Wied is known to have collected at least 37 species from that region, including *Evolvulus frankenioides* Moric., *Evolvulus maximilianii* Mart. ex Choisy, and *Merremia cissoides* (Lam.) Hallier f. (Moraes et al., 2013d).

*Cordia longiflora* Colla, Herb. Pedem. 4: 220. 1835. TYPE. BRAZIL. Espírito Santo, Rio Doce, "Rio d'Oro" [sic], s.d., *Anonymous* [Wied ?] *s.n.* (unlocated).

Colla wrongly has quoted the locality as being "Rio d'Oro," as he had done for *Crateva tapia* L. (Colla, 1833: 232), *Zwingera discolor* Colla (Colla, 1833: 556–557), *Indigofera porrigens* Mart. ex Colla (Colla, 1834: 148), and *Spermacoce martiana* Colla (Colla, 1835a: 146; as "Rio Dano"). As pointed out by Moraes et al. (2013a), Rio Doce is a well-documented locality for Wied, with verified specimens for 37 species (Moraes et al., 2013d), whilst Martius never visited that region. The specimen collected by Wied "in silvarum Oceano conterminarum margine et in sepibus inter Victoria et Bahiam" (BR 0000008506115), which is a syntype of *Cordia poliophylla* Fresen., would conform to the protologue of *Cordia longiflora* Colla.

*Stemodia macrotricha* Colla, Herb. Pedem. 4: 327. 1835. TYPE: BRAZIL. Bahia, Rio Jequitinhonha, "arenosis ad Rio Belmonte," s.d., *Anonymous* [Wied] *s.n.* (unlocated).



Turner and Cowan (1993) and Souza and Giulietti (2009) have placed *Stemodia macrotricha* Colla as synonym of *S. verticillata* (Mill.) Hassl., although they have not seen any original material of Colla's name. The only Wied specimen located to date for Scrophulariaceae s.l. from the region of "Rio Belmonte" refers to *Herpestis stricta* Schrad. Additionally, a specimen examined by those

authors from the region of Belmonte, Bahia, has been determined by them as belonging to different taxa: *Harley 17440* has been placed by Turner and Cowan (1993) under *Stemodia pratensis* (Aubl.) C.C. Cowan, and by Souza and Giulietti (2009) under *S. foliosa* Benth., who did not accept the new combination and synonymy proposed by the former authors.

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