

NEW COMBINATIONS AND NEW NAMES IN *PALICOUREA* (RUBIACEAE)
FOR SPECIES OF *PSYCHOTRIA* SUBGENUS *HETEROPSYCHOTRIA*
OCCURRING IN THE GUIANAS

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ABSTRACT

Species formerly included in *Psychotria* subgen. *Heteropsychotria* occurring in the Guianas (Guyana, Suriname and French Guiana) and now belonging to the genus *Palicourea* are evaluated for the forthcoming Rubiaceae treatment in the *Flora of the Guianas*. A total of 79 species of this group are here recognized, including taxa previously transferred by other authors. Moreover, 79 lectotypifications are made in the present work. Species already included in the traditional delimitation of *Palicourea* are not discussed in this treatment. Sixty new combinations and three new names are here proposed. For these new combinations and new names, their basionyms, other synonyms, types, and distributions are given.

KEY WORDS: *Carapichea*, *Cephaelis*, *Gamotopea*, *Nonatelia*, *Petagomoa*, *Psychotria*, *Tapomea*, Guiana Shield, Guyana, Suriname, French Guiana, Neotropics, type designations

RESUMEN

Las especies anteriormente incluidas en *Psychotria* subgénero *Heteropsychotria* que se encuentran en las Guayanas (Guyana, Surinam y Guayana Francesa) y actualmente incluidas en el género *Palicourea* se están evaluando para hacer próximamente una revisión y estudio de la familia Rubiaceae de la *Flora of the Guianas*. Son reconocidas 79 especies de este grupo, incluyendo los taxa anteriormente transferidos por otros autores. Además, se hacen 79 lectotipificaciones en el presente trabajo. Las especies ya incluidas en la delimitación tradicional de *Palicourea* no son discutidas en este estudio. Se proponen sesenta nuevas combinaciones y tres nuevos nombres para el género *Palicourea*. Los basónimos, sinónimos, tipos y distribuciones de las nuevas combinaciones y los nuevos nombres propuestos se presentan en esta publicación.

PALABRAS CLAVES: *Carapichea*, *Cephaelis*, *Gamotopea*, *Nonatelia*, *Petagomoa*, *Psychotria*, *Tapomea*, Escudo da Guayana, Guyana, Suriname, Guayana Francesa, Neotropicos, designación de tipos

During the 20th century and the beginning of the 21st century *Palicourea* Aubl. and *Psychotria* L. have been recognized as distinct genera of tribe Psychotrieae by most Rubiaceae specialists (e.g., Steyermark 1972, 1974; Taylor & Steyermark 2004; Delprete et al. 2005; Delprete 2010; Taylor 2012). *Palicourea* has been distinguished from *Psychotria* by its yellow, orange, red, pink or purple (rarely white) corollas, with a long tube laterally inflated at the base and pollinated by either humming birds or butterflies; and the latter by having white, yellowish-white, greenish-white or beige (rarely pale yellow) corollas, with a straight, short tube (not basally inflated), and pollinated by bees and other small insects. *Psychotria* has been traditionally divided into two subgenera: (1) subgen. *Psychotria*, with stipules caducous (rarely persistent), usually round, ovate to obovate; fruits red at maturity, and vegetative parts drying grayish to pinkish to reddish-brown; and (2) subgen. *Heteropsychotria* Steyerm., with stipules persistent, bilobed (basal sheath with two narrow lobes on each side), fruits red, blue purple-black, yellow, orange or white at maturity; and vegetative parts usually drying green (e.g., Steyermark 1972, 1974; Taylor & Steyermark 2004; Delprete et al. 2005; Delprete 2010; Taylor 2012).

Recent molecular phylogenies showed that the tribe Psychotrieae, as traditionally delimited, is composed of two monophyletic groups, one that includes *Psychotria* subgen. *Psychotria*, i.e., *Psychotria sensu stricto*, and the other including several genera, among which are *Palicourea* and *Psychotria* subgen. *Heteropsychotria*. This

latter clade was recently named tribe *Palicoureeae* Robbr. & Manen (Andersson 2002; Andersson & Rova 1999; Nepokroeff et al. 1999; Robbrecht & Manen 2006; Razafimandinbison et al. 2008, 2014). These molecular analyses demonstrated that *Palicourea* and *Psychotria* subgen. *Heteropsychotria* form a clade of approximately 600 Neotropical species (Taylor 2015a). The transfer of taxa from *Psychotria* subgen. *Heteropsychotria* to *Palicourea* is complicated by the fact that several species of subgen. *Heteropsychotria* have recently been assigned to other genera, based on morphological and/or molecular evidence, for example *Carapichea* Aubl. (Taylor & Gerau 2013), *Coccocondra* Rauschert (Taylor 2011), *Eumachia* DC. (Taylor 2005 [as *Margaritopsis*]; Delprete & Kirkbride 2015), *Notopleura* (Benth.) Bremek. (Taylor 2001), and *Ronabea* Aubl. (Taylor 2004). Therefore, a careful morphological analysis of the taxa in *Psychotria* subgen. *Heteropsychotria* is necessary before transferring them to *Palicourea*.

As currently widely delimited (Borhidi 2011 [2012]; Taylor 2015a, 2015b), *Palicourea* can be recognized by the following characters: persistent, bilobed stipules; terminal, thyrsoid, paniculate or capitate inflorescences, sometimes subtended by or included in colorful, foliaceous bracts (*Cephaelis* group); inaperturate pollen with thin sexine (Johansson 1992); and, commonly blue to purplish-black drupes with 2–5 pyrenes (Taylor 1996, 1997, 2015a, 2015b; Taylor et al. 2010).

Although the molecular phylogenies supporting the wider circumscription of *Palicourea* have been available for more than a decade, it took some time before specialists started to publish the necessary combinations, due to the complications explained above and to the large number of species that need to be transferred. The first to publish new combinations in *Palicourea* was Borhidi (2011 [2012]), who transferred the species of *Psychotria* subgen. *Heteropsychotria* occurring in Mexico. Taylor (2015a, 2015b) undertook the transfer of the species of *Psychotria* subgen. *Heteropsychotria* in a systematic way, complemented with detailed morphological observations, proposing 35 new combinations in *Palicourea* section *Tricephalium* (Müll. Arg.) C.M. Taylor (Taylor 2015a) and 17 new combinations in section *Didymocarpaceae* C.M. Taylor (Taylor 2015b). In the present work 60 new combinations and three new names in *Palicourea* are proposed for the species of *Psychotria* subgen. *Heteropsychotria* occurring in the Guianas (Guyana, Suriname, French Guiana). These new combinations and new names are needed for the forthcoming Rubiaceae treatment for the *Flora of the Guianas*.

MATERIAL AND METHODS

This study is based on examinations of herbarium specimens, samples preserved in 60% ethanol, digital images, and direct field observations. Herbarium specimens were studied either by visiting and/or through loans from the herbaria listed in the acknowledgements. Specimens were examined using a dissecting microscope. For accurate citation of herbarium specimens, after the herbarium acronym we cite the barcode number between square brackets (when available); when no barcode number was available on the specimen, we cited the accession number between square brackets, preceded by “No.” All specimens cited have been examined, unless the herbarium acronym is followed by “n.v.” (not seen). For further information about the typification of Aublet’s taxa, see Delprete (2015).

SYSTEMATIC TREATMENT

Palicourea Aubl., Hist. Pl. Guiane 172. 1775. *Psychotria* sect. *Palicourea* (Aubl.) Müll. Arg. in Martius, Fl. Bras. 6(5):227. 188.

TYPE: *Palicourea guianensis* Aubl.

Nonatelia Aubl., Hist. Pl. Guiane 182. 1775. TYPE: *Nonatelia officinalis* Aubl. [= *Palicourea tenerior* (Cham.) Delprete & J.H. Kirkbr.]

Tapogomea Aubl., Hist. Pl. Guiane 157. 1775, nom. rej. (vs. *Cephaelis* Sw. (1788), nom. cons.). TYPE: *Tapogomea violacea* Aubl. (Pfeiffer 1874:1353) [= *Palicourea apoda* (Steyerm.) Delprete & J.H. Kirkbr.].

Cephaelis Sw., Prodr. 3:45. 1788, nom. cons. TYPE: *Cephaelis muscosa* (Jacq.) Sw. [= *Palicourea muscosa* (Jacq.) Delprete & J.H. Kirkbr.]

Gamotopea Bremek., Recueil Trav. Bot. Néerl. 31:293. 1934. TYPE: *Gamotopea purpurea* (Aubl.) Bremek. [= *Palicourea debilis* (Müll. Arg.) Delprete & J.H. Kirkbr.].

Petagomoa Bremek., Recueil Trav. Bot. Néerl. 31:295. 1934. TYPE: *Petagomoa hirta* (Miq.) Bremek. [= *Palicourea hirta* (Miq.) Delprete & J.H. Kirkbr.].

Psychotria subgenus *Heteropsychotria* Steyerm., Mem. New York Bot. Gard. 23:484. 1972. TYPE: *Psychotria deflexa* DC. [= *Palicourea deflexa* (DC.) Borhidi].

Notes.—Spruce (in Spruce & Wallace 1908:97) transferred *Palicourea guianensis* to the genus *Nonatelia*, as *N. guianensis* (Aubl.) Spruce. He described it as being very common near his encampment on the Rio Aripecurú, now called the Rio Cuminá, a tributary of the Rio Trombetas in the state of Pará, Brazil. He gave a short description of the plant: “a handsome Rubiaceae tree, with ample opposite leaves; tubular flowers, red at the base, yellow upwards, and rather shorter than those of the honeysuckle; and small many-ribbed fruits, looking externally not unlike those of the hemlock” and its distribution as: “scattered all through French and Brazilian Guayana [now state of Amapá].” *Spruce 565* (K000471435) was collected at “Cach. do R. Aripecurú” in December of 1849, described on the collection label as a “handsome tree of 30–50 ft, fl. yellow, vermilion at base,” and correctly identified as *Palicourea guianensis*. From Spruce’s description and *Spruce 565*, there can be no doubt that he transferred *Palicourea guianensis* to *Nonatelia*.

It was suggested that Spruce’s new combination, in transferring the type of *Palicourea* to *Nonatelia*, might serve as the first effectively published choice to establish the priority of *Nonatelia* over *Palicourea*, since both genera then had equal priority. “A choice as provided for in Art. 11.5 is effected by adopting one of the competing names, or its final epithet in the required combination, and simultaneously rejecting or relegating to synonymy the other(s), or homotypic (nomenclatural) synonyms thereof” (ICNafp: Art. 11.5, Note 3; McNeill et al. 2012). Although the genus *Palicourea* and *Palicourea guianensis*, its type, are homotypic, they are not synonyms. Nowhere in the ICNafp are generic and specific names, i.e. names of different principal ranks, considered to be homotypic synonyms. Synonymy appears to operate only within the rank groups defined in Art. 38.11 or 41.2 of the ICNafp (McNeill et al. 2012), not between them. Spruce rejected the name *Palicourea guianensis* and accepted the name *N. guianensis*, which is not rejection of *Palicourea* because the generic name is not a nomenclatural synonym of the species (W. Greuter, pers. comm. 2016).

1. *Palicourea acuminata* (Benth.) Borhidi, *Acta Bot. Hung.* 53:243. 2011 [2012]. *Psychotria acuminata* Benth., *Bot. Voy. Sulphur 107*. 1845. TYPE: COLOMBIA: Gorgona Island, 11 & 14 Jan 1837, G. Barclay 921 (LECTOTYPE, here designated: BM [BM001008963 and BM001008964, mounted separately]).

Psychotria urophylla Schtdl., *Linnaea* 28:522. 1856. TYPE: BRAZIL. AMAZONAS: without locality, s.d., E.F. Poeppig 1578 (LECTOTYPE, here designated: HAL [HAL0075849]); ISOLECTOTYPES: F [No. 768522], G [G00222654, 2 sheets]).

Distribution.—Mexico, Central America, Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Bentham (1845:107) indicated the gathering locality of *Psychotria acuminata* Benth. as “Isle of Gorgona, and Colombian coast” without citing the collector or the herbarium of deposit, and a second collection in his discussion, “Hartweg gathered on the Magdalena [...]” Borhidi (2011 [2012]:243) cited the type of *P. acuminata* as “Isle de Gorgona, and Colombian coast, coll.: Barclay, s.n.; HOLOTYPE: BM!” However, Borhidi’s citation is not a valid typification, as he did not state “designated here” or an equivalent phrase (Art. 7.10, and Note 6 under Art. 9.9). At BM are two sheets of *Barklay 921*, with barcodes BM001008963 and BM001008964, labelled as sheet 1 and sheet 2, and according to Art. 8.3 are to be treated as multiple preparations of one specimen. These two sheets are here designated as the lectotype of *P. acuminata*.

Schlechtendal (1857:522) described *Psychotria urophylla* and cited a specimen of *Poeppig 1578* preserved in his personal herbarium. At HAL is preserved a sheet, with barcode HAL0075849 and a handwritten label by Schlechtendal “Poeppig Herb. 1578, *Psychotria* (Dicarenos) *urophylla* Schtdl., Linn. XXVIII, p. 522” with the stamp “scripsit: D.F.C. v. Schlechtendal pat.” This specimen is here designated as the lectotype of this name.

At G there are two sheets of *Poeppig 1578*, with barcode G00222654, which are here treated as isolectotypes. The first specimen has the handwritten labels “Pal. *urophylla* Müll.-Arg., scripsit Müll.-Arg.,” “Amazon: Poeppig n. 1578” and “*Psychotria urophylla* Schtdl., *Linnaea* 28:522. 1856, Isotype, C.M. Taylor, 2010.” The second specimen has the handwritten label “1578, Poeppig.”

2. *Palicourea adolfoduckei* Delprete & J.H. Kirkbr., **nom. nov.**, non *Palicourea duckei* Standl. (1940:195). *Cephaelis duckei* Standl., *Publ. Field Columbian Mus., Bot. Ser.* 8:374. 1931, non *Psychotria duckei* Standl. (1936). *Psychotria spectabilis* Steyererm., *Mem. New York Bot. Gard.* 23:664. 1972 (based on *Cephaelis duckei*). TYPE: BRAZIL. PARÁ: Amazon River estuary, Breves Region, Aramá River, “silva non inundabili,” 29 Nov 1922, A. Ducke s.n. (RB 18828) (HOLOTYPE: BF; LECTOTYPE, here designated: K [K000174473]; ISOLECTOTYPES: P [P02428068], U [U0006243], US [00129809], frag [ex B] F [No. 638770]).

Distribution.—Southern Venezuela, Guyana, and Amazonian Brazil (Amapá, Pará, Amazonas).

3. *Palicourea aetantha* (Sandwith) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis aetantha* Sandwith, Kew Bull. 1949:261. 1949. *Psychotria aetantha* (Sandwith) Steyer., Mem. New York Bot. Gard. 23:665. 1972. TYPE: GUYANA: Eagle Mountain, watershed between Potaro River and Konawaruk River, 25 Jan 1943, D.B. Fanshawe 1121 (*Forest Dept.* 3857) (HOLOTYPE: K [2 sheets, K00017399, K000174400]).

Distribution.—Known only from Guyana.

Notes.—Sandwith (1949:261) cited the type of this taxon as “[...] D.B. Fanshawe in Forest Dept. no. 3857 (type in Kew herb.)” At K are two sheets of *Forest Dept.* 3857, numbered “Sheet I” [K00017399] and “Sheet II” [K000174400] that are here interpreted as multiple preparations of the same specimen, and as the holotype of *Cephaelis aetantha* Sandwith.

4. *Palicourea alba* (Aubl.) Delprete & J.H. Kirkbr., **comb. nov.** *Tapogomea alba* Aubl., Hist. Pl. Guiane 1:164, t. 62, f. 4. 1775, non *Psychotria alba* Ruiz & Pav. (1799). *Callicocca alba* (Aubl.) Gmel., Syst. Nat. 5:371. 1791. *Cephaelis alba* (Aubl.) Willd., Sp. Pl. 1:978. 1798. *Uragoga alba* (Aubl.) Kuntze, Rev. Gen. Pl. 2:959. 1891, non *Uragoga alba* (Ruiz & Pav.) Kuntze (1891). *Uragoga alba* (Aubl.) Pulle, Enum. Pl. Sur. 446. 1906, comb. superfl. *Gamotopea alba* (Aubl.) Bremek., Recueil Trav. Bot. Néerl. 31:294. 1934. *Psychotria ulviformis* Steyer., Mem. New York Bot. Gard. 23:638. 1972. TYPE: FRENCH GUIANA: without locality, s.d. [1762–1764], J.B.C.F. Aublet s.n. (LECTOTYPE (Lanjou & Uittien 1940:159): P-JJR 8: 265D (lower portion of the sheet); ISOLECTOTYPE: BM [BM001008942]).

Geophila picta Rolfe, Kew Bull. 1896:18. 1896, non *Psychotria picta* Wall. (1830). TYPE: cultivated by Sander & Co., sent by Im Turn from Guyana, Demerara, Sep 1845, E.F. in Thurn 431 (HOLOTYPE:K [K000432823]).

Cephaelis paraensis Standl., Publ. Field Columbian Mus., Bot. Ser. 8:180. 1930, non *Psychotria paraensis* Müll. Arg. (1881). *Geophila paraensis* J. Huber ex Standl., Publ. Field Columbian Mus., Bot. Ser. 8:180. 1930, nom. nud. pro syn. (nom. inval. sub Art. 36.1c). TYPE: BRAZIL. Pará: near Belem, Mar 1929, L. Williams & E. Sella 32 (HOLOTYPE: F [No. 602008]; ISOTYPE: frag G [G00301265]).

Distribution.—Colombia, Venezuela, Guianas, Ecuador, Peru, and Brazil.

5. *Palicourea alloantha* (Steyer.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria alloantha* Steyer., Brittonia 36:154, f. 1. 1984. TYPE: FRENCH GUIANA: 4 km S of Pic Matécho, 30 km ENE of Saül, 16 Jul 1979, J.J. de Granville 3127 (HOLOTYPE: VEN [No. 106068]; ISOTYPES: CAY [2 sheets, CAY028111, CAY028112], US [00138638]).

Distribution.—Only known from central French Guiana.

6. *Palicourea amplectens* (Benth.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria amplectens* Benth., J. Bot. (Hooker) 3:230. 1841. TYPE: BRAZIL. Roraima: “Rio Branco” [now state of Roraima], without locality, 1839, Rob. Schomburgk ser. I, 879 (HOLOTYPE: K [K000174329]).

Psychotria paradoxa Müll. Arg. in Martius, Fl. Bras. 6(5):313. 1881. TYPE: BRAZIL. AMAZONAS: “Barra” [now Manaus], by forest streams, Mar 1851, R. Spruce 1176 (LECTOTYPE, **here designated**: G [G00300816]; ISOLECTOTYPES: K [K000174328], P [P00837088]).

Psychotria romboutsii Bremek., Recueil Trav. Bot. Néerl. 33:712. 1936. TYPE: SURINAME: Upper Sipaliwini River, Kamp 19, 15 Feb 1936, H.E. Rombouts 470 (HOLOTYPE: U [U0006163]; ISOTYPES: K [K000174330], MO [No. 1613334], US [001338961]).

Distribution.—Venezuela, Suriname, Amazonian Brazil, and Bolivia.

7. *Palicourea apoda* (Steyer.) Delprete & J.H. Kirkbr., **comb. nov.**, non *Palicourea violacea* (Aubl.) A. Rich. (1830:95, based on *Nonatelia violacea* Aubl.). *Tapogomea violacea* Aubl., Hist. Pl. Guiane 1:157, t. 60. 1775. *Cephaelis violacea* (Aubl.) Sw., Fl. Ind. Occ. 1:439. 1797, non Aubl. (1775), nec Willd. (1798). *Uragoga violacea* (Aubl.) Pulle, Enum. Pl. Sur. 446. 1906. *Psychotria apoda* Steyer., Mem. New York Bot. Gard. 23:668. 1972. TYPE: FRENCH GUIANA: Tall forests of French Guiana and Oyak territory, “in sylvis Guianae & praesertim in territorio Oyac dicto,” s.d. [1762–1764], J.B.C.F. Aublet s.n. (lectotype (Lanjou & Uittien 1940:159): P-JJR 8: 265A; ISOLECTOTYPE: LINN-SM [No. 340.2, specimen N. 1 (excluding specimen N. 2)]).

Distribution.—Colombia, Venezuela, Guianas, and Brazil.

8. *Palicourea aubletii* Delprete & J.H. Kirkbr., **nom. nov.**, non *Palicourea paniculata* (L.f.) Moraes & C.M. Taylor (2012). *Nonatelia paniculata* Aubl., Hist. Pl. Guiane 1:181, t. 70, f. 2. 1775. *Oribasia paniculata* (Aubl.) J.F. Gmel., Syst. Nat. 367. 1791. *Psychotria paniculata* (Aubl.) Raesch., Nomencl. Bot., ed. 3, 56. 1797. *Psychotria flexuosa* Willd., Sp. Pl. 1:966. 1798, nom. superfl. illeg. (sub Art. 52.1, based on *Nonatelia paniculata*). TYPE: FRENCH GUIANA: Cayenne, s.d. [1762–1764], J.B.C.F. Aublet s.n. (LECTOTYPE, **here designated**: BM [BM001008958]).

Distribution.—Venezuela, Guianas, and Brazil.

9. *Palicourea axillaris* (Sw.) Borhidi, Acta Bot. Hung. 53:243. 2011 [2012]. *Cephaelis axillaris* Sw., Prodr. 45: 1788, non *Psychotria axillaris* Willd. (1798, based on *Ronabea latifolia* Aubl.), nec *Psychotria axillaris* Vell. (1829 ["1825"]). *Psychotria aubletiana* Steyerl., Mem. New York Bot. Gard. 23:694. 1972. TYPE: LESSER ANTILLES. St. Kitts and Navis: "St. Christopher Island" [now St. Kitts], s.d. [1779–1781], *F. Masson s.n.* (lectotype designated by Howard (1982:443): BM [BM001123052]; possible isolectotypes S [No. 508-661], S [No. 508-664]).

Cephaelis cacuminis Steyerl., Acta Bot. Venez. 2:335. 1967; non *Psychotria cacuminis* Standl. (1931). *Psychotria aubletiana* Steyerl. var. *cacuminis* (Steyerl.) Steyerl., Mem. New York Bot. Gard. 23:697. 1972 (citing the basionym as "*Psychotria cacuminis* Steyerl." instead of *Cephaelis cacuminis* Steyerl.; which is an error to be corrected; Art. 41.6). TYPE: VENEZUELA. BOLIVAR: Auyan-Tepui, central summit of NW branch, S of Jimmy Angel, 1800 m, 7 May 1964, J.A. Steyerl. 93564 (HOLOTYPE: VEN [No. 65694]; ISOTYPES: K [K000432870], U [U0006169]).

Psychotria aubletiana var. *centro-americana* Steyerl., Mem. New York Bot. Gard. 23:694. 1972. TYPE: HONDURAS: Morazon Dept., between El Pingüin and Prado de Fatima, La Tigra, 1800 m, 30 Dec 1962, L.O. Williams & A. Molina 11237 (HOLOTYPE: NY [00132557]; ISOTYPES: EAP [EAP93550], F [No. 1615840]).

Psychotria aubletiana var. *andina* Steyerl., Mem. New York Bot. Gard. 23:695. 1972. TYPE: VENEZUELA. Táchira: Colombian-Venezuelan border, above Betania and Tamá, Quebrada Buena Vista, 2300–2450 m, 22–24 May 1967, J.A. Steyerl. et al. 98683 (HOLOTYPE: VEN [No. 72571]; ISOTYPE: US [00138658]).

Psychotria aubletiana f. *pubescens* Steyerl., Mem. New York Bot. Gard. 23:697. 1972. TYPE: VENEZUELA. Mérida: 15 km NW of Ejico, La Carbonera, 2200 m, 19 Jun 1953, E.L. Little 15238 (HOLOTYPE: VEN [No. 37073]).

Psychotria aubletiana f. *tomentella* Steyerl., Mem. New York Bot. Gard. 23:697. 1972. TYPE: VENEZUELA. BOLIVAR: Slope leading to Apácará-tepui, 2000–2150 m, 20 Jun 1953, J.A. Steyerl. 75830 (HOLOTYPE: VEN [No. 55732]; ISOTYPES: F n.v., NY [00132601]).

Psychotria aubletiana var. *producta* Steyerl., Mem. New York Bot. Gard. 23:698. 1972. TYPE: VENEZUELA. Mérida: Between La India and El Morro, 2430 m, 15 May 1964, Ijjasz 425 (HOLOTYPE: MAR n.v.).

Distribution.—Mexico, Central America, Lesser Antilles, Trinidad, Colombia, Venezuela, Guyana, Ecuador, and Peru.

Notes.—Steyerl. (1972:694) cited the type of *Cephaelis axillaris* Sw. as "St. Christopher Island, West Indies, Swartz." Howard (1989:443) stated that "Steyerl. (1972) reported the type to be a Swartz specimen from St. Kitts. However, it is a Masson collection (BM) from St. Kitts." We follow Howard's statement and interpret it as a lectotypification. Specimen BM001123052 has the handwriting in the back of the sheet "Insula Sti. [Santi] Christophori. F. Masson." Saint Christopher Island is an earlier name of Saint Kitts Island.

Two specimens at S are possible isolectotypes of *Cephaelis axillaris* Sw. One, accession No. S08-661, without collection locality and without collector. The second specimen, accession No. S08-664, has the handwriting in the back of the sheet "*Cephaelis axillaris* Swz [...] ex Ins. Sti. Chritoph., Ind. Occid. 898."

Steyerl. (1972:694–700) recognized five varieties and two forms in *Psychotria aubletiana*, using mostly the number of secondary veins, stipule size, and pubescence. However, as indicated by Taylor and Steyerl. (2004:724–725), these characters are widely overlapping and do not show any geographical correlation. Therefore, no subspecific ranks are here recognized under this species.

10. *Palicourea ayangannensis* (Steyerl.) Delprete & J.H. Kirkbr., comb. nov. *Psychotria ayangannensis* Steyerl., Mem. New York Bot. Gard. 23:594, f. 82. 1972. TYPE: GUYANA: Mount Ayanganna, E flank, above Thompson Camp, 1370–1525 m, 8 & 12 Aug 1960, S.S. Tillett et al. 45059 (HOLOTYPE: NY [00132603]; ISOTYPES: US [00138661], VEN [No. 82606]).

Distribution.—Only known from Guyana.

11. *Palicourea berteriana* (DC.) Borhidi (as "*berteriana*"), Acta Bot. Hung. 53:243. 2011 [2012]. *Nonatelia pubescens* Spreng., Syst. Veg., 16 ed., 1:751. 1825 [1824], non *Psychotria pubescens* Sw. (1788), nec *Palicourea pubescens* (Sw.) Borhidi (2012:246). *Psychotria berteriana* DC. (as "*P. berteriana*"), Prodr. 4:515. 1830. TYPE: DOMINICAN REPUBLIC: without locality, s.d., C. Bertero s.n. (HOLOTYPE: G-DC [no barcode]; ISOTYPES: M [M-0189126], TO n.v.).

Psychotria berteriana subsp. *venezuelica* Steyerl., Mem. New York Bot. Gard. 23:535. 1972. TYPE: VENEZUELA. Aragua: Parque Nacional Rancho Grande, 1200 m, 28 May 1937, H. Pittier 14010 (HOLOTYPE: VEN [No. 15859]; ISOTYPES: F [No. 895054], US [00138667]).

Distribution.—Mexico, Central America, Antilles, Colombia, Venezuela, Guyana, Ecuador, Peru, Brazil, and Bolivia.

Notes.—The specific epithet of this species was published by Candolle (1830:515) as "*berteriana*" and was maintained as such by many authors; however, according to Art. 60.7 of the ICNafp (McNeill et al. 2012), it is to be corrected to "*berteroana*" as indicated by Taylor and Steyerl. (2004:725–726).

Steyermark (1972:534–536, as “berteriana”) recognized three varieties under *P. berteroana*, using corolla size and inflorescence architecture. Taylor and Steyermark (2004:725–726) restricted the delimitation of this species, elevating var. *luxurians* to specific rank (occurring from Costa Rica to Bolivia); at the same time they treated var. *venezuelica* as a synonym, without recognizing any variety in *P. berteroana*, decisions with which we concur.

12. *Palicourea bostrychothysus* (Sandwith) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria bostrychothysus* Sandwith, Kew Bull. 1939:553. 1940. TYPE: GUYANA: Kopinang River, Anandabaru, 545 m, Apr 1926, R.A. Altson 470 (HOLOTYPE: K [K000174468]; ISOTYPE: NY [0013613]).

Distribution.—Venezuela, Guianas, and northern Brazil.

13. *Palicourea boyanii* (Steyerm.) C.M. Taylor, Novon 24:68. 2015. *Psychotria boyanii* Steyerm., Mem. New York Bot. Gard. 23:659. 1972. TYPE: GUYANA: Upper Mazaruni River Basin, Partang River, Merume Mountains, 1140 m, 1 Jul 1960, S.S. Tillett et al. 43954 (HOLOTYPE: NY [00132625]; ISOTYPES: GH [00095143], NY [00132616], US [00138676], VEN [No. 65266]).

Distribution.—Only known from Guyana.

14. *Palicourea bracteocardia* (DC.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis bracteocardia* DC., Prodr. 4:534. 1830. *Psychotria bracteocardia* (DC.) Müll. Arg. in Martius, Fl. Bras. 6(5):362. 1881. *Uragoga bracteocardia* (DC.) Kuntze, Revis. Gen. Pl. 2:959. 1891. *Uragoga bracteocardia* (DC.) Pulle, Enum. Pl. Sur. 447. 1906, comb. superfl. TYPE: BRAZIL. Bahia: [“in collibus umbrosis”], s.d. [1827–1830], *P. Salzmann s.n.* (first-step LECTOTYPE (Steyermark 1972:689); **second-step LECTOTYPE, here designated:** G-DC [G00300922]; ISOLECTOTYPES: MPU [4 sheets, MPU022236, MPU022237, MPU022238, MPU022239]).

Cephaelis pubescens Hoffmanns. ex Willd. in Roem. & Schult., Syst. Veg. 5:213. 1819, non *Psychotria pubescens* Sw. (1797), nec *Palicourea pubescens* (Sw.) Borhidi (2011). TYPE: BRAZIL. Bahia: without locality, s.d. [1804], *F.W. Sieber s.n.* [dedit] *J.C. Hoffmannsegg!* (HOLOTYPE: B-W 4148).

Psychotria ctenophora Steyerm., Mem. New York Bot. Gard. 23:690. 1972. *Cephaelis sylvatica* Bremek., Recueil Trav. Bot. Néerl. 31:299. 1934, non *Psychotria sylvatica* Blume (1826). TYPE: SURINAME: Wilhelmina Range, 12 Jun 1926, *G. Stahl s.n.* (B.W. 7201) (**LECTOTYPE, here designated:** U [U0006181]; ISOLECTOTYPES: U [2 sheets, U0006182, U0006183]).

Distribution.—Colombia, Trinidad, Venezuela, Guianas, and Brazil.

Notes.—Candolle (1830:534) described *Cephaelis bracteocardia* DC. and listed three forms not validly published, because they are polynomials, based on shape and color of the inflorescence bracts, citing specimens from French Guiana collected by Patris, and from Bahia, Brazil, collected by Salzmann. Steyermark (1972:689) indicated the type of this species as “Bahia, Brazil, Salzmann” without indicating in which herbaria the specimens are deposited; this action is a first-step lectotypification. The specimen at G-DC with barcode G00300922 is here designated as second-step lectotype.

As indicated by Steyermark (1972:690–691) and Taylor and Steyermark (2004:728) the differences between *Psychotria ctenophora* Steyerm. and *P. bracteocardia* (DC.) Müll. Arg. are subtle, and based mostly on pubescence of the hypanthium and number of leaf secondary veins, which are also found to intergrade in several specimens of the two taxa as identified by Steyermark. A detailed analysis throughout the geographic range showed that these characters amply intergrade and do not show any geographical correlation; therefore, these two taxa are here treated as synonymous.

15. *Palicourea callithrix* (Miq.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis callithrix* Miq., Linnaea 18:746. 1844 [1845]. *Gamotopea callithrix* (Miq.) Bremek., Recueil Trav. Bot. Néerl. 31:294. 1934. *Psychotria callithrix* (Miq.) Steyerm., Mem. New York Bot. Gard. 23:640. 1972. TYPE: SURINAME: Para, Feb–Apr 1844, *A. Kappler 1473* (first-step LECTOTYPE (Steyermark 1972:640); **second-step LECTOTYPE, here designated:** P [P00836998]; ISOLECTOTYPES: Bf, G [barcode unknown], MO [No. 124054], P [P00836997]; probable islectotype (without collection number) U [U0171177]; photo-B at F, NY, MO; photo-P at F, MO).

Evea tantanoides Britton & Standl., J. Wash. Acad. Sci. 13:106. 1923. *Cephaelis tantanoides* (Britton & Standl.) R.O. Williams & Cheesman, Fl. Trinidad 2(1):41. 1928. *Psychotria callithrix* (Miq.) Steyerm. var. *tantanoides* (Britton & Standl.) Steyerm., Mem. New York Bot. Gard. 23:640. 1972. TYPE: TRINIDAD: Caparo, 26 Oct 1916, *W.E. Broadway s.n.* (*Trin. Herb.* 9774) (HOLOTYPE: F [No.544814]; ISOTYPES: NY [00131309], frag F [No. 626017]).

Psychotria oiapoquensis Steyerm., Mem. New York Bot. Gard. 23:647. TYPE: BRAZIL. Amapá: Oiapoque River, 5 km SE of Clevelandia, 7 Aug 1960, *H.S. Irwin et al.* 47393 (HOLOTYPE: NY [01107939]; ISOTYPES: K [K000174485], S [No. S05-1104], US [2 sheets, 00138893, 00138894], VEN [No. 85983]).

Distribution.—Trinidad and Guianas.

Notes.—Miquel ("1844" [1845]) in the introduction of Part VII of *Symbolae ad Floram Surinamensem* indicated that he described the taxon using specimens collected by Hostmann and Kappler. With the description of *Cephaelis callithrix* Miq., Miquel ("1844" [1845]):746 did not cite any collection or herbaria. Steyermark (1972:640) cited the type of this taxon as "Para, Suriname, *Kappler 1473*," which is a first-step lectotypification, because he did not indicate a herbarium. Delprete (2001:398–399) indicated the type as "[...] *Kappler 1473* [...] lectotype, here selected: P, photo-P at F, MO" However, at P are two specimens of *Kappler 1473*, and the one with barcode P00836998 is here designated as the lectotype of this taxon.

16. *Palicourea campyloneura* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria campyloneura* Müll. Arg. in Martius, Fl. Bras. 6(5):302. 1881. *Psychotria deflexa* subsp. *campyloneura* (Müll. Arg.) Steyermark, Mem. New York Bot. Gard. 23:504. 1972. TYPE: BRAZIL. AMAZONAS: Rio Uaupes, Panuré, Oct 1852, R. *Spruce 2751* (LECTOTYPE, here designated: K [K000174295]; ISOLECTOTYPES: frag G [G00300930], GH [00095147]).

Distribution.—Colombia, Venezuela, Guianas, Ecuador, Peru, and Brazil.

Notes.—Müller Argoviensis (1881:302) and Steyermark (1972:504), along with the description of *Psychotria campyloneura* Müll. Arg., cited the collection *Spruce 2751* without indicating the herbarium of deposit. The obvious choice for selecting a lectotype would be a specimen at G, where Müller Argoviensis worked; however, at G there is only a single sheet with just a few fragments. At K there is a well-preserved specimen, barcode K000174295, with several leaf pairs and a complete inflorescence, which is here designated as the lectotype of this taxon.

17. *Palicourea campylopoda* (Standl.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria campylopoda* Standl., Publ. Field Columbian Mus., Bot. Ser. 7:437. 1931. TYPE: VENEZUELA. AMAZONAS: Mount Duida, Central Camp, 1440 m, 20–28 Dec 1928, H.H. Tate 534 (HOLOTYPE: NY [00132627]; ISOTYPE: F n.v.).

Distribution.—Venezuela, Guyana, Northern Brazil (Guiana Shield).

18. *Palicourea cardiomorpha* (C.M. Taylor & A. Pool) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria cordifolia* Kunth in Humb. & Bonpl., Nov. Gen. Sp. 3:365. 1819, *nom. illeg.*, non *Psychotria cordifolia* F. Dietr. (1807). *Siderodendrum paniculatum* Willd. ex Cham. & Schltdl., Linnaea 4:26–27. 1829, *pro. syn.* *Psychotria cardiomorpha* C.M. Taylor & A. Pool, Novon 4:303. 1994. TYPE: VENEZUELA. AMAZONAS: Rio Atabapo, San Baltasar, Prairal au 8 [29–30 Apr 1800], J.A. Bonpland & F.W.H.A. Humboldt 937 (HOLOTYPE: P not traced [not at P-Bonpl. as stated by Taylor (1994:303)]; LECTOTYPE, here designated: B-W 02811-010; ISOLECTOTYPE: photo FOBN000501 at F B†).

Psychotria cordifolia subsp. *perpusilla* Steyermark, Mem. New York Bot. Gard. 23:708. 1972. *Psychotria cardiomorpha* subsp. *perpusilla* (Steyermark.) C.M. Taylor & A. Pool, Novon 4:303. 1994. TYPE: GUYANA: Pirara, s.d. [1841–1842], *Rob. Schomburgk, ser. II, 282* (= *Rich. Schomburgk 576*) (HOLOTYPE: P [P00837020]; ISOTYPE: P [P00837021]).

Distribution.—Colombia, Venezuela, Guianas, and Brazil.

19. *Palicourea ceratantha* (Standl.) C.M. Taylor, Novon 23:465. 2014 [2015a]. *Psychotria ceratantha* Standl., Publ. Field Columbian Mus., Bot. Ser. 7:439. 1931. TYPE: VENEZUELA. AMAZONAS: Mount Duida, summit, peak n. 7, 2148 m [according to specimen label; but Standley (1931:440) wrote "2115 m"], Aug 1928–Apr 1929, G.H.H. Tate 669 (HOLOTYPE: NY [00132636]; ISOTYPES: F [No. 621621], NY [00132637]).

Psychotria arenaria Standl. & Steyermark, Fieldiana, Bot. 28:594. 1953. TYPE: VENEZUELA BOLIVAR: Ptari-teptui, base of S slope, 2410 m, 6 Nov 1944, J.A. Steyermark 59869 (HOLOTYPE: F [No. 1181732 and No. 1181733]; ISOTYPE: VEN [No. 25830]).

Psychotria yutajensis Steyermark, Ann. Missouri Bot. Gard. 75:348. 1988. TYPE: VENEZUELA. AMAZONAS: Dept. Atures, summit of unnamed peak, 8 km NW of Yutajé settlement, 4 km W of Rio Coro Coro, W of Serrania de Yutajé, 5°41'N, 66°10'W, 1500–1760 m, 4 Mar 1987, R. Liesner & B. Holst 21649 (HOLOTYPE: MO [No. 3482981]; ISOTYPES: NY [00132876], U [U0006261], US [00153755], VEN [No. 357668]).

Distribution.—Venezuela and Guyana.

Notes.—There are two preparations of *Steyermark 59869* at F, 1181732 labelled as "1st sht." and 1181733 labelled as "2nd sht." Steyermark annotated 1181732 as "Isotype" and 1181733 as "Type," but Standley and Steyermark (1953) stated in the protologue that there was a holotype and an isotype of the type gathering at F, so they are here treated as two preparations of the holotype.

20. *Palicourea colorata* (Hoffmanns. ex Roem. & Schult.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis colorata* Hoffmanns. ex Roem. & Schult., Syst. Veg. 5:213. 1819. *Psychotria colorata* (Hoffmanns. ex Roem. & Schult.) Müll. Arg. in Martius, Fl. Bras. 6(5):372. 1972. TYPE: BRAZIL: [Amazon Basin], without locality, s.d., F.W. Sieber s.n. [dedit J.C. Hoffmansegg] (HOLOTYPE: B-W 4149/1a-b).

Psychotria megapontica Müll. Arg. in Martius, Fl. Bras. 6(5):361. 1881. *Psychotria colorata* subsp. *megapontica* (Müll. Arg.) Steyermark., Mem. New York Bot. Gard. 23:685. 1972. TYPE: BRAZIL. Goiás: "Megaponte" [sic! "Meia Ponte," now Pirenópolis], s.d., J.H. Pohl 976 (LECTOTYPE, **here designated**: G [G 00301215]).

Psychotria glabrescens Müll. Arg. in Martius, Fl. Bras. 6(5):363. 1881. *Cephaelis glabrescens* (Müll. Arg.) Standl., Publ. Field Columbian Mus., Bot. Ser. 8:375. 1931. TYPE: BRAZIL. Ceará: [Serra do Araripe], Jan 1839, G. Gardner 1962 (LECTOTYPE, **here designated**: G [G00436488]; ISOLECTOTYPES: G [G00436487], K [K000015573]).

Cephaelis rosea Benth., J. Bot. (Hooker) 3:224. 1841. *Psychotria rosea* (Benth.) Müll. Arg. in Martius, Fl. Bras. 6(5): 360. 1881. TYPE: GUYANA: Banks of the Essequibo River, s.d. [1837], Rob. Schomburgk, ser. I, 290 [erroneously reported as "156" by Bentham (1841:224) and Steyermark (1972:687)] (LECTOTYPE, **here designated**: K [K000174435]; ISOLECTOTYPE: US [00129830]). Bentham (1841:224) erroneously reported the type as "Banks of the Essequibo, Schomburgk n. 156." However, Rob. Schomburgk ser. I, 156 is *Strychnos cogens* Benth., while the type of *Cephaelis rosea* Benth. is instead Rob. Schomburgk, ser. I, 290, and the specimen with barcode K000174435 is here designated as lectotype.

Cephaelis amoena Bremek., Recueil Trav. Bot. Néerl. 31:297. 1934. TYPE: SURINAME: Surinam River, near Botopassie, 16 Jul 1908, J. Tresling 154 (HOLOTYPE: U [U0006176]).

Psychotria claviflora Steyermark., Mem. New York Bot. Gard. 23:686. 1972. TYPE: VENEZUELA. AMAZONAS: Puerto Ayacucho, 100 m, 18 May 1940, L. Williams 12992 (HOLOTYPE: VEN [No. 15129]).

Psychotria rosea f. *calvescens* Steyermark., Mem. New York Bot. Gard. 23:688. 1972, **syn. nov.** TYPE: VENEZUELA. AMAZONAS: Río Yatua above mouth of Río Yacibo, 100–140 m, 4 Dec 1953, B. Maguire et al. 36518 (HOLOTYPE: NY [00132804]); ISOTYPES: US [00138963], VEN n.v.).

Psychotria rosea var. *trichophora* Steyermark., Mem. New York Bot. Gard. 23:688. 1972, **syn. nov.** TYPE: COLOMBIA. Sur de Santander: Between Carare River and Magdalena River, Puerto Berrio, 8 km S of Raizudo, 250 m, 30 Apr 1937, O. Haught 2190 (HOLOTYPE: NY [00132805]; ISOTYPES: A [00095203], F [No. 929616], US [2 sheets, 00138964, 00138964]). Each type specimen has two labels with contrasting collection locality; the printed label reports "Department of Sur de Santander, vicinity of Puerto Berrio, between Carare and Magdalena Rivers, alt. 100–700 meters, Oscar Haught 2190" and the type-written label states "Valley of Dorada Creek, about 8 km south of Raizudo, at about 250 m altitude."

Distribution.—Venezuela, Guianas, and Brazil.

Notes.—Müller Argoviensis (1881:363) described *Psychotria glabrescens* Müll. Arg. citing the collection "Ceará: Gardner n. 1962" without indicating the herbarium of deposit. The specimen Gardner 1962 at G, barcode G00436488, is here designated as the lectotype. The labels of G00436488 and K000015573 report "Ceará, [...] Serra do Araripe, Jan 1839, [Gardner] 1962," but the label of G00436487, erroneously reports "Province of Piahy, Juliet–September 1839, Gardner." According to the travel diary of Gardner (1975), the label data of G00436488 and K000015573 are correct and correspond to the collection cited by Müller in the protologue.

As indicated by Taylor and Steyermark (2004:733): "Steyermark separated *Psychotria colorata*, *P. calviflora*, *P. rosea*, and *P. glabrescens* of eastern Brazil based on details of pubescence and degree of fusion of the external inflorescence bracts. However, these cannot be separated consistently based on any morphological distinctions, and Steyermark (1972:685–686) cited the collection Williams 12992 twice, under his new species *P. calviflora* and again under *P. colorata*." Also, Steyermark (1972:684–689) recognized several varieties and forms in *P. colorata* and *P. rosea*, based on general vestiture, which also amply intergrade. Therefore, a careful analysis of more than 500 collections from Venezuela to Northeastern and Central Brazil demonstrated that all these taxa are synonymous.

21. *Palicourea concinna* (Oliv.) Delprete & J.H. Kirkbr, **comb. nov.** *Psychotria concinna* Oliv. in E.F. im Thurn, Timerhi 5:196. 1886. TYPE: GUYANA: Mount Roraima, 6500 ft [= 1981 m], 13 Dec 1884, E.F. im Thurn s.n. (LECTOTYPE, **here designated**: K [K000174454]; ISOLECTOTYPE: US [00138711]).

Distribution.—Tepui summits of southern Venezuela and Guyana.

Notes.—Oliver (in E.F. im Thurn, 1886:196), along with the original description of *Psychotria concinna* Oliv., cited the collection "Roraima: Ledge 6,500 feet and summit, E.F. im Thurn. No. missing." Steyermark (1972:597) erroneously cited the type of this taxon as "Summit, Roraima, 2606 m, 1898, F.V. McDonnell & J.J.

Quelch 667." On one sheet at K are mounted four different collections: 16/12/1884, *im Thurn s.n.*; 13/12/1884, *im Thurn s.n.*; McDonnell & J.J. *Quelch 88*; McDonnell & J.J. *Quelch 667*. One of them, *im Thurn s.n.*, collected on 13 Dec 1884, with barcode K000174454, corresponds entirely with the collection data cited in the protologue and is here designated as the lectotype.

22. *Palicourea coussareoides* (Standl.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria coussareoides* Standl., Publ. Field Columbian Mus., Bot. Ser. 7:441. 1931, non *Mapouria coussareoides* Müll. Arg. (1876). TYPE: VENEZUELA. AMAZONAS: Slopes of Mount Duida, Aguita, 4000 ft [= 1219 m], Aug 1928–Apr 1929, G.H.H. Tate 919 (HOLOTYPE: NY [00132650]).

Rudgea tillettii Steyer., Mem. New York Bot. Gard. 17(1):416. 1967. TYPE: GUYANA: Upper Mazaruni River, Porkknocker Camp 2, on Partang River, ca. 19 mi from mouth, 625 m, 28 Jun 1960, S.S. Tillett *et al.* 43934 (HOLOTYPE: NY [00133238]; ISOTYPES: NY [00133239], VEN [No. 64649]).

Psychotria coussareoides var. *ciliata* Steyer., Mem. New York Bot. Gard. 23:496. 1972. TYPE: VENEZUELA. BOLIVAR: Cerro Venamo, SW portion, near Guyana border, near the junction with a W affluent with Rio Venamo, 950–1000 m, 10 Feb 1964, J.A. Steyermark & E. Dunsterville 92929 (HOLOTYPE: VEN [No. 62981]; ISOTYPE: NY [00132651]).

Distribution.—Tepui summits of southern Venezuela and Guyana.

23. *Palicourea crocochlamys* (Sandwith) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria crocochlamys* Sandwith, Kew Bull. 1939:555. 1939. TYPE: GUYANA: Kaieteur Savannah, 1200 ft [= 365 m], 6 Sep 1937, N.Y. Sandwith 1390 (HOLOTYPE: K [K000174451]; ISOTYPE: U [U0006180]).

Cephaelis tatei Standl. in Gleason, Bull. Torrey Bot. Club 56:406. 1929, non *Psychotria tatei* Standl. (1931), nec *Palicourea tatei* (Standl.) Delprete & J.H. Kirkbr. TYPE: VENEZUELA. BOLIVAR: Slopes of Roraima, Arabupu, Weitipu forest, 4200 ft [= 1280 m], 1 Jan 1928, G.H.H. Tate 262 (HOLOTYPE: NY [00131030]; ISOTYPE: frag F [No. 588019]).

Distribution.—Venezuela (uplands and tepui summits) and Guyana.

24. *Palicourea cypellantha* (Steyer.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria cypellantha* Steyer., Brittonia 36:155, f. 2. 1984. TYPE: FRENCH GUIANA: Maroni River, Pompidou-Papaichton, 27 Dec 1978, C. Sastre 6463 (HOLOTYPE: VEN [No. 136556]; ISOTYPES: CAY [transferred to P], P n.v.).

Distribution.—Only known from French Guiana.

25. *Palicourea debilis* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria debilis* Müll. Arg. in Martius, Fl. Bras. 6(5):346. 1881. TYPE: BRAZIL. AMAZONAS: "Flor. amazon, in sylvis ad Ega [now Tefé]," Oct 1831, E.F. Poeppig 2745 (LECTOTYPE, **here designated**: W [No. 0065615]; ISOLECTOTYPE: frag G [G00300458]).

Tapogomea purpurea Aubl., Hist. Pl. Guiane 1:162, t. 62, f. 3. 1775, non *Palicourea purpurea* C.M. Taylor, (1989). *Callicocca purpurea* (Aubl.) Gmel., Syst. Nat. 1:371. 1791. *Cephaelis purpurea* (Aubl.) Willd., Sp. Pl. 1:978. 1798. *Uragoga purpurea* (Aubl.) Kuntze, Revis. Gen. Pl. 2:962. 1891. *Gamotopia purpurea* (Aubl.) Bremek., Recueil Trav. Bot. Néerl. 31:294. 1934. *Psychotria variegata* Steyer., Mem. New York Bot. Gard. 23:638. 1972. TYPE: French Guiana, tall forests of French Guiana, "Florebat in sylvis remotis" and "dans les grandes forêts de la Guiane," s.d. [1762–1764], *Aublet s.n.* (lectotype [Lanjou & Uittien 1940:159]: P:JJR 8: 265C! [upper portion of sheet]; ISOLECTOTYPE: BM barcode BM001008943! [specimens numbered "1, 2, 3," excluding "4"]).

Cephaelis surinamensis Standl., Publ. Field Columbian Mus., Bot. Ser. 4:335. 1929. *Gamotopia surinamensis* (Standl.) Bremek., Recueil Trav. Bot. Néerl. 31:294. 1934. TYPE: SURINAME: without locality, s.d., A. Kappler 1113b [Pl. Surinam. Ed. R.F. Hohenacker. 1845] (HOLOTYPE: S [No. S05-1510]).

Distribution.—Venezuela, Guianas, and Amazonian Brazil and Bolivia.

Notes.—When Müller Argoviensis (1881:346) described *Psychotria debilis* Müll. Arg., he cited *Poeppig 2745* from Ega [now Tefé], in the Brazilian Amazon, without indicating the herbarium of deposit. He worked at G, and in that herbarium there is only a sheet with fragments of three loose leaves and a few inflorescence bracts. A sheet with several branches and inflorescences was found at W, accession No. 0065615, which has two labels on the lower right corner, one with Müller Argoviensis handwriting "Psychotria debilis Müll. Arg." and the other with (author unknown, probably Poeppig) "2745, *Cephaelis alba* Willd., Flor. amazon. In sylvis ad Ega, October 1831." On the left side of the sheet is a scale bar with the number "31157." This specimen is here selected as the lectotype of this taxon.

The type specimen of *Psychotria debilis* at G was annotated by C.M. Taylor as *Psychotria ulviformis* Steyer. [= *Palicourea alba* (Aubl.) Delprete & J.H. Kirkbr.]. However, the W specimen has terminal, short-pedun-

culate inflorescences with narrowly ovate bracts. In *Psychotria ulviformis* the leaf blades are round to obtuse at apex and the inflorescences are axillary, long-pedunculate (peduncles 2–6.5 cm long), while in *Psychotria variegata* Steyererm. [= *Palicourea debilis* (Müll. Arg.) Delprete & J.H. Kirkbr.] the leaf blades are acute at apex and the inflorescences are terminal, short-pedunculate (peduncles 0.5–2.2 cm long). Therefore, *Psy. debilis* is here treated as synonymous with *Psychotria variegata* Steyererm.

Standley (1929:335) cited the type of *Cephaelis surinamensis* Standl. as “A. Kappler, ed. R.F. Hohenacker, 1845 (Herb. Stockholm, type)”; however, the collector and collection number of this specimen is “A. Kappler 1113b” according to the handwritten label on the S type specimen.

26. *Palicourea deflexa* (DC.) Borhidi, Acta Bot. Hung. 53:243. 2011 [2012]. *Psychotria deflexa* DC., Prodr. 4:510. 1830.

TYPE: FRENCH GUIANA: without locality, s.d., *J.B. Patris s.n.* (first-step LECTOTYPE (Steyermark 1972:502), **second-step LECTOTYPE, here designated**: G-DC [without barcode, sheet N. 4, with two flowering branches]; ISOLECTOTYPES: G-DC [without barcode, sheet N. 3, with flower buds]; dubious isolectotypes G-DC [without barcode, probably not the same species; sheets N. 1, sterile, and sheet N. 2, with flower buds]).

Distribution.—Mexico, Central America, Antilles, Colombia, Venezuela, Guianas, Ecuador, Bolivia, Brazil, and Paraguay.

Notes.—Candolle (1830:510) described *Psychotria deflexa* DC. citing a specimen collected by Patris in French Guiana, without indicating the herbarium of deposit, which is the same information reported by Steyermark (1972:502). In the G-DC herbarium are four specimens annotated by Candolle with this name, which at the time of examination did not have a barcode number, and were identified by the pencil numbers 1, 2, 3 and 4. These numbers were written on the sheets to distinguish them from each other, and are not to be interpreted as consecutive numbers of the same gathering. Sheet number 4 is here selected as the lectotype of this name.

Steyermark (1972:501–505) subdivided *Psychotria deflexa* into five subspecies: subsp. *patens* (Jamaica), subsp. *campyloneura* (Antilles, Central and South America), subsp. *venulosa* (Amazon Basin), subsp. *deflexa* (Central America to Bolivia), and subsp. *cubensis* (Cuba). All these subspecies were raised to species level by Taylor and Steyermark (2004), emphasizing their different pyrenes, stipules, and inflorescence architecture, and this concept is here adopted.

27. *Palicourea dichotoma* (Rudge) Delprete & J.H. Kirkbr., **comb. nov. *Cephaelis dichotoma* Rudge, Pl. Guian. 29, t. 44.**

1805. *Psychotria dichotoma* (Rudge) Bremek., Recueil Trav. Bot. Néerl. 31:301. 1934, *nom. illeg.*, non *Psychotria dichotoma* Humb. & Bonpl. ex Roem. & Schult. (1819). TYPE: FRENCH GUIANA: Cayenne, s.d., *J. Martin s.n.* (LECTOTYPE, **here designated**: BM [BM000611038]; ISOLECTOTYPES: B† (photo-B No. 721 at G, NY), BM [BM000611037]).

Psychotria platypoda DC., Prodr. 4:510. 1830. TYPE: FRENCH GUIANA: without locality, s.d., *J.B. Patris s.n.* (LECTOTYPE, **here designated**: G-DC! [no barcode]; ISOLECTOTYPE: G! [barcode unknown]).

Psychotria brevipes DC., Prodr. 4:511. 1830. *Uragoga brevipes* (DC.) Kuntze, Rev. Gen. Pl. 2:959. 1891. TYPE: FRENCH GUIANA: without locality, s.d., *J.B. Patris s.n.* (LECTOTYPE, **here designated**: G-DC! [no barcode]; ISOLECTOTYPE: G! [G00300388]).

Psychotria martiana Müll. Arg. in Martius, Fl. Bras. 6(5):339, t. 51. 1881. TYPE: Brazil, Serra de Macacú, s.d., A.C.V. Schott 5302 (799.d) (first-step LECTOTYPE (Steyermark 1972:600); **second-step LECTOTYPE, here designated**: NY [00132735]; ISOLECTOTYPE: frag F [No. 870290]).

Distribution.—Central America, Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Müller Argoviensis (1881:339) with the description of *Psychotria martiana* Müll. Arg. cited the following syntypes: Brazil, Bahia: Ilheus, *Princ. Neuwied 11*; *Martius Herb. Fl. Bras. 618*; *Blanchet s.n.*, *Leo Du Pasquier*; Serra de Macaco, *Schott 5302*; in silvis umbrosis ad R. Upa, *Riedel 327*; Maranhão: in silvis R. Itapicuru, *Martius s.n.* Steyermark (1972:600) cited “Serra da Macacú, *Schott 5302* [799.9]” as the type of *P. martiana*, which is a first-step lectotypification. The NY specimen with barcode 00132735 is here designated as the second-step lectotype of this taxon.

28. *Palicourea didymocarpus* (A. Rich. ex DC.) Griseb. (as “*didymocarpa*”), Cat. Pl. Cub. 138. 1866. *Ronabea didymocarpus* A. Rich. ex DC., Prodr. 4:504. 1830. *Psychotria didymocarpus* (A. Rich. ex DC.) Lemée, Fl. Guyane Franç. 3:564. 1953.

TYPE: FRENCH GUIANA: without locality, s.d. [1785–1789], *L.C.M. Richard s.n.* (NEOTYPE, **here designated**: P [P04017866], G-DC not traced).

Psychotria cornigera Benth., J. Bot. (Hooker) 3:227. 1841, non *Palicourea cornigera* C.M. Taylor (1997). *Uragoga cornigera* (Benth.) Kuntze, Revis. Gen. Pl. 2:960. 1891. *Psychotria bahiensis* var. *cornigera* (Benth.) Steyerl., Mem. New York Bot. Gard. 23:518. 1972. TYPE: GUYANA: without locality, s.d. [1837], *Rob. Schomburgk, ser. I, 251* (first-step LECTOTYPE (Steyermark 1972:519), **second-step LECTOTYPE, here designated:** K [K000174307]; ISOLECTOTYPES: F [No. 734130], G [4 sheets, G00300747, G00300748], L [L0057956], TCD [TCD0005785], US [00138716]).

Psychotria subcuspidata Müll. Arg. in Martius, Fl. Bras. 6(5):261. 1881. TYPE: BRAZIL. AMAZONAS: Between Santarem and “Barra do Rio Negro” [now Manaus], Oct 1850, R. Spruce (*Psychotria* 3) 991 (LECTOTYPE, **here designated:** G [G00300809]; ISOLECTOTYPES: frag [ex G] F [No. 729881], NY [00132836, without collection number], W [No. 1889-0014258, without collection number]).

Distribution.—Colombia, Venezuela, Guianas, Ecuador, Bolivia, and Brazil.

Notes.—Candolle (1830) described *Ronabea didymocarpos* A. Rich. ex DC. (1830:1504) citing a collection from French Guiana, but without mentioning collector, collection number or herbarium of deposit. No specimen with this name was traced at G or G-DC. After the binomial, Candolle wrote “(A. Rich. l.c.)” as a direct reference to Achille Richard’ *Memoirs des Rubiacées*, which in September 1830 was still an unpublished manuscript. In A. Richard’s text, a collection by L.C.M. Richard (his father) from French Guiana was cited for this taxon. A specimen is present at P, barcode P04017866, with the label “*Didymocarpus membranaceus* [unpublished name, non *Didymocarpus* Wall. (1819)], frutex, Bacca subspherica, 2-cocca, in sylvis Cayennae” handwritten by L.C.M. Richard, and “L. Cl. Richard Herbarium Guyan-Antillarum” handwritten in red ink by A. Richard. This specimen, probably unseen by Candolle, is here designated as the neotype of *Ronabea didymocarpos*.

Müller Argoviensis (1881:261) described *Psychotria subcuspidata* Müll. Arg. citing “[...] inter Santarem and Barra do Rio Negro: *Spruce Psychotria* (3) n. 991” without mentioning the herbarium of deposit. At G is a specimen, barcode G00300809, which is here designated as the lectotype; three other Spruce specimens without collection number, with the label “inter Santarem and Barra do Rio Negro and handwriting “*Psychotria* (3)” are here treated as isolectotypes.

29. *Palicourea duricoria* (Standl. & Steyerl.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria duricoria* Standl. & Steyerl., Fieldiana, Bot. 28:599. 1953. TYPE: VENEZUELA. AMAZONAS: Cerro Duida, SE-facing slopes, Caño Negro, ca. 5000 ft [= 1524 m], 25–26 Aug 1944, J.A. Steyermark 58048 (HOLOTYPE: F [No. 1180693]; ISOTYPES: A [00095157], NY [00132659]).

Psychotria everardii subsp. *sipapoensis* Steyerl., Mem. New York Bot. Gard. 23:540. 1972. TYPE: VENEZUELA. AMAZONAS: Cerro Sipapo (Paráque), 23 Dec 1948, B. Maguire & L. Politi 27864 (HOLOTYPE: NY [00132660]; ISOTYPES: K [K000432838], US [00138750], VEN [80184]).

Psychotria duricoria var. *longiloba* Steyerl., Mem. New York Bot. Gard. 23:533. 1972. TYPE: VENEZUELA. AMAZONAS: Serranía Yutajé, Rio Manapiare, Camp Yutajé, 1300 m, 8 Feb 1953, B. Maguire & C.K. Maguire 35092 (HOLOTYPE: NY [00132660]; ISOTYPE: US [00138735]).

Distribution.—Tepui summits and table mountains of Southern Venezuela, Guyana, and northern Brazil.

30. *Palicourea ernestii* (K. Krause) C.M. Taylor, Novon 24:70. 2015. *Cephaelis ernestii* K. Krause, Notizbl. Bot. Gard. Berlin-Dahlem 6(56): 210. 15 May 1914, non *Psychotria ernestii* K. Krause (1909). TYPE: VENEZUELA. BOLIVAR: Mount Roraima, 1900 m, Jan 1910, E. Ule 8771 (HOLOTYPE: B†; lectotype (Taylor 2015b:70): K [K000432821]; ISOLECTOTYPES: F [No. 895499], G [G00300450], U [U006252]).

Psychotria transiens Wernham, J. Bot. 52:314. [Publication date unknown] 1914. TYPE: “Guyana, Mount Roraima” [VENEZUELA. BOLIVAR: Roraima-tepui], upper slope, 10 Dec 1884, E.F. im Thurn 191 (first-step lectotype (Steyermark 1972:660), second-step lectotype (Taylor 2015b:70): K [K000432819]).

Distribution.—Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Wernham (1914:314) described *Psychotria transiens* Wernham and cited two collections as “Guiana, Roraima [...] *Im Thurn* 191!, 214! Hbb. Brit. and Kew.” However, Taylor (2015b:70) stated that these specimens were instead collected in “Venezuela, BOLIVAR: Roraima-tepui,” although without citing the original source for this correction. Steyermark (1972:660) cited “*im Thurn* 191” as the type, without indicating the herbarium of deposit, which is here interpreted as a first-step lectotypification. Taylor (2015b:70) indicated the specimen *im Thurn* 191 at K, barcode K000432819, as the lectotype, which is here treated as a second-step lectotypification. Taylor indicated BM1008945 as an isolectotype, but this specimen is *im Thurn* 214, and is not an isolectotype.

31. *Palicourea everardii* (Wernham) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria everardii* Wernham, J. Bot. 52:316. 1914. TYPE: GUYANA: Mount Roraima, path to Upper Savannah, 16 Dec 1884, E.F. im Thurn 291 (first-step LECTOTYPE (Steyermark 1967:433), **second-step LECTOTYPE, here designated:** K [K000174449]); ISOLECTOTYPES: BM n.v., US [00138749, specimen on the left side of the sheet!).

Psychotria cacuminis Standl., Publ. Field Columbian Mus., Bot. Ser. 7(4):436. 1931, non *Psychotria cacuminis* Steyermark. (1967; = *Psychotria aubletiana* Steyermark.). TYPE: VENEZUELA. AMAZONAS: Summit of Mount Duida, crest of Ridge 25, 6300 ft [= 1920 m], 26 Nov–16 Dec 1928, G.H.H. Tate 410 (HOLOTYPE: NY [00132625]); ISOTYPE: F [No. 603539]. Although NY 00132625 is labeled as isotype, it is the only specimen at NY and is the holotype.

Psychotria vernicifolia Standl., Publ. Field Columbian Mus., Bot. Ser. 7(4):462. 1931. TYPE: VENEZUELA. AMAZONAS: Mount Duida, summit of Peak N. 7, 7100 ft [= 2164 m], Aug 1928–Apr 1929, G.H.H. Tate 628 (HOLOTYPE: NY [00132860]); ISOTYPE: photo-NY and frag F [No. 621627]).

Psychotria phaneroneura Standl., Publ. Field Columbian Mus., Bot. Ser. 7(4):455. 1931. TYPE: VENEZUELA. AMAZONAS: Summit of Mount Duida, savannah hills, 4400 ft [= 1341 m], Aug 1928–Apr 1929, G.H.H. Tate 789 (HOLOTYPE: NY [00132780]); ISOTYPE: photo-NY and frag F [No. 621616]).

Psychotria everardii subsp. *neblinensis* Steyermark., Mem. New York Bot. Gard. 23:540. 1972. TYPE: VENEZUELA. AMAZONAS: Cerro da Neblina, Rio Yatua, 18 km W of Cumbre Camp, 1900–2100 m, 1–2 Dec 1957, B. Maguire et al. 42266 (HOLOTYPE: NY [00132667]); ISOTYPE: F [No. 80180]).

Distribution.—Tepui summits of southern Venezuela and Guyana.

Notes.—Steyermark (1972:540–542) recognized four subspecies in *Psychotria everardii*, using calyx lobe shape, corolla size, and pubescence as diagnostic characters: (1) subsp. *everardii* (Venezuela and Guyana), (2) subsp. *sipapoensis* Steyermark. (= *Psy. duricoria* Standl. & Steyermark., Venezuela and adjacent Brazil), (3) subsp. *neblinensis* Steyermark. (= *Psy. everardii*), and (4) subsp. *tatei* (Standl.) Steyermark. (= *Psy. tatei* Standl., Venezuela). The present delimitation of *Psychotria everardii* follows that of Taylor and Steyermark (2004:738), in recognizing subsp. *tatei* as a separate species, and treating *P. everardii* without subspecific taxa.

32. *Palicourea fanshawei* (Standl.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis fanshawei* Standl., Bull. Torrey Bot. Club. 75:574. 1948. *Psychotria fanshawei* (Standl.) Steyermark., Mem. New York Bot. Gard. 23:664. 1972. TYPE: GUYANA: Kaieteur Plateau, Wallaba forest, savannas, 8 May 1944, B. Maguire & D.B. Fanshawe 23296 (HOLOTYPE: F [No. 1160153]); ISOTYPES: K [K00174448], MO [No. 4312989], NY [00131021], U [U0006190]). The specimen at F [No. 1160153] is labeled isotype, but is instead the holotype, as indicated by Standley (1948:574).

Distribution.—Tepui slope forest of Venezuela and Guyana.

Notes.—Taylor and Steyermark (2004:738–739) stated that it is “a handsome species in flower and fruit. It is similar to several species of the Guianas, notably *P. aetantha* [(Sandwith) Steyermark.], and *P. potaroensis* [(Sandwith) Steyermark.], but it resembles no other species known from the flora area.”

33. *Palicourea faramoides* (Bremek.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria faramoides* Bremek., Acta Bot. Néerl. 11:193. 1962. TYPE: SURINAME: Suriname River, Jodensavanna, 15 Jan 1957, P.C. Heylingers 573 (HOLOTYPE: U [Sheet No. 1, U0006191, and Sheet No. 2, U0006192]).

Distribution.—White-sand coastal savannas of Suriname.

34. *Palicourea glabra* (Aubl.) Delprete & J.H. Kirkbr., **comb. nov.** *Tapogomea glabra* Aubl., Hist. Pl. Guiane 1:165, t. 63. 1775. *Uragoga glabra* (Aubl.) Kuntze, Rev. Gen. Pl. 2:960. 1891, non *Psychotria glabra* (Turrill) Fosberg (1942). TYPE: FRENCH GUIANA: Cayenne, s.d. [1762–1764], J.B.C.F. Aublet s.n. (lectotype (Lanjou & Uittien 1940:159): P-JJR 8: 265E; ISOLECTOTYPES: BM (not traced, photo at NY), LINN-SM 340.5).

Psychotria medusula Müll. Arg., Flora 59:541, 545. 1876. *Cephaelis medusula* (Müll. Arg.) Steyermark., Mem. New York Bot. Gard. 17(1):428. 1967. TYPE: BRAZIL. AMAZONAS: Rio Negro, São Gabriel da Cachoeira, Mar 1852, R. Spruce 2597 (first-step lectotype (Steyermark 1972:428), second-step lectotype (Delprete 2001:397): G [G00301120]; ISOLECTOTYPES: B†, BM [2 sheets, BM000624168, BM000624169], BR [00000531600], frag-G at F, K [2 sheets, K000174392, K000174393], NY [00132739], P [2 sheets, P00837113, P00837114]; photo-G at F, GH, MO, photo-K at NY).

Cephaelis blepharophylla Standl., Publ. Field Columbian Mus., Bot. Ser. 8:182. 1930. *Psychotria blepharophylla* (Standl.) Steyermark., Mem. New York Bot. Gard. 23:649. 1972. TYPE: BRAZIL. Pará: Near Belém [as “Pará”], 27–29 Mar 1929, L.I. Williams & E. Sella 33 (HOLOTYPE: F [No. 602009]; ISOTYPE: G [G003001114]).

Distribution.—Colombia, Venezuela, Guianas, Peru, and Brazil.

Notes.—Steyermark (1972:649) treated *Tapogomea glabra* as a synonym of *Psychotria blepharophylla* (Standl.) Steyermark. Taylor and Steyermark (2004:747) treated *T. glabra*, *P. blepharophylla*, and *P. medusula* Müll. Arg. as synonymous, a decision with which we concur.

35. *Palicourea glandulicalyx* (Steyermark) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria glandulicalyx* Steyermark, Mem. New York Bot. Gard. 23:536. 1972. TYPE: VENEZUELA. BOLIVAR: Wallaba forest, summit of Chimantá Massif, Torono-tepui, 2165–2180 m, 9 Feb 1955, J.A. Steyermark & J.J. Wurdack 640 (HOLOTYPE: VEN [No. 78081]; ISOTYPES: F [No. 1772479], NY [00132679]).

Psychotria glandulicalyx var. *densipubens* Steyermark, Mem. New York Bot. Gard. 23:538. 1972. TYPE: VENEZUELA. AMAZONAS: Cerro Jáua, Meseta de Jáua, cumbre de la porción Central-Occidental de la Meseta, 60 km NW de la Misión de Campamento Sanidad del Río Kanarakuni, 4°45'N, 64°26'W, 1922–2100 m, 22–27 Mar 1967, J.A. Steyermark 98057 (LECTOTYPE, **here designated**: VEN [No. 70883]; ISOLECTOTYPE: NY [00132681]).

Psychotria glandulicalyx subsp. *camaniensis* Steyermark, Mem. New York Bot. Gard. 23:538. 1972. TYPE: VENEZUELA. AMAZONAS: Cerro Camani, summit, 1500 m, 17 Feb 1951, B. Maguire et al. 31823 (HOLOTYPE: NY [00132682]; ISOTYPE: VEN [No. 82116]).

Distribution.—Tepui slopes and summits of southern Venezuela, Guyana, and northern Brazil.

Notes.—Steyermark (1972:536) described *Psychotria glandulicalyx* Steyermark and stated “(holotype VEN, isotypes NY, F),” but labeled the specimen at VEN as “isotype” and that at NY as “holotype.” As the publication has priority over the specimen labels, the specimen at VEN is the holotype, and those at F and NY are isotypes.

Steyermark (1972:538) described *Psychotria glandulicalyx* [subsp. *glandulicalyx*] var. *densipubens* Steyermark, citing Steyermark 98057, but did not indicate in which herbarium the holotype was deposited. The VEN specimen with accession No. 70883 has a holotype label handwritten by Steyermark; therefore, this specimen is here designated as the lectotype of this taxon.

Steyermark (1972:536–539) recognized two subspecies and two varieties in *Psychotria glandulicalyx*, although the characters are considered trivial for taxonomic recognition. Taylor and Steyermark (2004) excluded subsp. *camaniensis* from this species without indicating its systematic position.

36. *Palicourea gracilentia* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria gracilentia* Müll. Arg., Flora 59:542, 545. 1876. TYPE: BRAZIL. Bahia: without locality, s.d. [1834], J.S. Blanchet 1590 (LECTOTYPE, **here designated**: G [G00300770]; ISOLECTOTYPE: BM [BM000624171]).

Psychotria brachybotrya Müll. Arg. in Martius, Fl. Bras. 6(5):327. 1881. TYPE: BRAZIL. AMAZONAS: Rio Negro, São Gabriel da Cachoeira, Mar 1852, R. Spruce 2190 (first-step LECTOTYPE (Steyermark 1972:609), **second-step LECTOTYPE, here designated**: P [P00836988]; ISOLECTOTYPES: K [K000173545], K [K00173546], P [P00836988], W [1889-0014256]).

Psychotria iquitosensis Standl., Publ. Columbian Mus., Bot. Ser. 8:195. 1930. TYPE: PERU. LORETO: Near Iquitos, 14 Jul 1929, L.I. Williams 1391 (HOLOTYPE: F [No. 604636]; ISOTYPES: frag G [G00300771], S [No. S05-1086]).

Distribution.—Mexico, Central America, Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Müller Argoviensis (1876:542, 545) described *Psychotria gracilentia* Müll. Arg. and cited the collection Blanchet 1590, without indicating the herbarium of deposit. The specimen at G, where Müller Argoviensis worked, is here designated as the lectotype.

Müller Argoviensis (1881:327) described *Psychotria brachybotrya* Müll. Arg. citing the following syntypes “Habitat in regione Rio Negro prope S. Gabriel: Spruce 2190; in sylvis ad flumen Japura: Martius et ibidem ad Abacaxis: Martius.” Steyermark (1972:609) cited the type as “Rio Negro prope San Gabriel, Amazonas, Brazil, Spruce 2190,” which is a first-step lectotypification, as he did not cite any herbarium. The specimen at P [P00836988] is here designated as the second-step lectotype.

37. *Palicourea granvillei* (Steyermark) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria granvillei* Steyermark, Brittonia 33:389, f. 2. 1981. TYPE: FRENCH GUIANA: La Fumée Mountain, summit, 410 m, 6 Mar 1975, J.J. de Granville 2353 (HOLOTYPE: VEN [No. 81445]; ISOTYPES: CAY [2 sheets, CAY024932, CAY024933], MO [2798769], NY [00334982], P [2 sheets, P00837061, P00837062]).

Distribution.—Only known from central French Guiana.

38. *Palicourea hemicephaelis* (Wernham) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria hemicephaelis* Wernham, J. Bot. 52:314. 1914. *Cephaelis hemicephaelis* (Wernham) Steyermark, Mem. New York Bot. Gard. 17(1):426, f. 41. 1967. TYPE: GUYANA: Potaro River, Kaieteur Savannah, Sep–Oct 1881, G.S. Jenman 1223 (HOLOTYPE: K [K000174447]).

Distribution.—Tepui slope forests of southern Venezuela and Guyana.

39. *Palicourea hirta* (Miq.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis hirta* Miq., *Linnaea* 17:71. 1843. *Uragoga hirta* (Miq.) Pulle, *Enum. Pl. Sur.* 446. 1906. *Petogomoa hirta* (Miq.) Bremek., *Recueil Trav. Bot. Néerl.* 31:295. 1934, non *Psychotria hirta* Humb. & Bonpl. ex Roem. & Schult. (1819). *Psychotria bremekampiana* Steyermark, *Mem. New York Bot. Gard.* 23:643. 1972. TYPE: SURINAME: Bergendaal Plantation, s.d. [1835–1850], *H.C. Focke 382* (first-step LECTOTYPE (Steyermark 1972:643), **second-step LECTOTYPE, here designated:** U [U0006171]).

Distribution.—Suriname, French Guiana, and Amazonian Brazil (Amapá and Pará).

Notes.—Miquel (1843:71) described *Cephaelis hirta* Miq. citing the locality “Surinami prope plantationem Bergendaal” without collector, collection number or herbarium of deposit. Steyermark (1972:643) cited the same locality and “Focke 382” without citing the herbarium of deposit, which is a first-step lectotypification. The specimen U0006171 is here designated a second-step lectotype.

40. *Palicourea hoffmannseggiana* (Roem. & Schult.) Borhidi, *Acta Bot. Hung.* 53:245. 2011 [2012]. *Cephaelis hoffmannseggiana* Roem. & Schult., *Syst. Veg.* 5:214. 1819. *Psychotria hoffmannseggiana* (Willd. ex Roem. & Schult.) Müll. Arg. in Martius, *Fl. Bras.* 6(5):336. 1881. TYPE: BRAZIL. Pará: without locality, s.d., *F.W. Sieber s.n.* [dedit *J.C. Hoffmanssegg*] (HOLOTYPE: B-W 4155, photo at NY).

Cephaelis rubra Hoffmanns. ex Roem. & Schult., *Syst. Veg.* 5:214. 1819. *Psychotria rubra* (Willd. ex Roem. & Schult.) Müll. Arg. in Martius, *Fl. Bras.* 6(5):336. 1881. TYPE: BRAZIL. [Amazon Basin]: without locality, s.d., *F.W. Sieber s.n.* [dedit *J.C. Hoffmanssegg*] (HOLOTYPE: B-W 4150/1).

Psychotria barbiflora DC., *Prodr.* 4:509. 1830. TYPE: BRAZIL. Bahia: without locality, 1831, *P. Salzmann s.n.* (first-step LECTOTYPE (Steyermark 1972:602), **second-step LECTOTYPE, here designated:** G [G00300780]); possible ISOLECTOTYPES: MPU [2 sheets, MPU022106, MPU022107], P [P00836992]).

Carapichea patrisii DC., *Prodr.* 4:536. 1830. *Cephaelis patrisii* (DC.) D. Dietr., *Syn. Pl.* 1:773. 1839. *Uragoga carapichea* Kuntze, *Revis. Gen. Pl.* 2:955. 1891; non *Uragoga patrisii* (DC.) Kuntze (1891). TYPE: FRENCH GUIANA: without locality, s.d., *J.B. Patris s.n.* (LECTOTYPE, **here designated:** G-DC [no barcode, sheet N. 4]; possible ISOLECTOTYPES: G-DC [sheets N. 1, 2 and 3]).

Psychotria furcata DC., *Prodr.* 4:512. 1830. PANAMA: without locality, s.d., *T. Haenke s.n.* (HOLOTYPE: G-DC! [without barcode]).

Psychotria heterocephala Müll. Arg. in Martius, *Fl. Bras.* 6(5):333. 1881. TYPE: BRAZIL. [State unknown]: Rio São João, s.d., *A.C.V. Schott 5301* (LECTOTYPE, **here designated:** G [G00300784]).

Psychotria bahiensis Müll. Arg. in Martius, *Fl. Bras.* 6(5):338. 1881, nom. illeg., non *Psychotria bahiensis* DC. 1830. TYPE: BRAZIL. Bahia: without locality, s.d., *J.S. Blanchet 1815* (LECTOTYPE, **here designated:** G [G00301031]; ISOLECTOTYPES: F [No. 734074], P [P00836959]).

Psychotria flavicans Müll. Arg. in Martius, *Fl. Bras.* 6(5):339. 1881. TYPE: BRAZIL. Bahia: Igreja Velha, 1841, *J.S. Blanchet 3246* (LECTOTYPE, **here designated:** G [G00300761, sheet No. 1; ISOLECTOTYPES: BM [BM000624170], F [2 sheets, No. 520907, No. 734075], G [G00300761, sheet No. 2], NY [00132671], P [2 sheets, P00837029, P00837030], U [U0006199]).

Psychotria hoffmannseggiana f. pubescens Steyermark, *Mem. New York Bot. Gard.* 23:607. 1972. TYPE: GUYANA: Kaieteur Plateau, vicinity of Kaieteur Falls, along W rim of Potaro River, ca. 1400 ft [= 426 m], 18 Feb 1962, *R.S. Cowan & T.R. Soderstrom 1897* (HOLOTYPE: VEN n.v.; ISOLECTOTYPES: MICH [1108255], US [00138792]).

Distribution.—Mexico, Central America, Greater Antilles, Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Candolle (1830:536) described *Carapichea patrisii* DC. and cited a collection made by Patris in French Guiana. In the G-DC herbarium are present four specimens annotated by Candolle with this name, which at the time of examination did not have a barcode number, and were identified by the pencil numbers 1, 2, 3 and 4, none of them with barcode. These numbers were written on the sheets to distinguish them from each other, and are not to be interpreted as labeling parts of the same specimen. Sheet number 4 is here selected as the lectotype of this name; the other three specimens are possible isolectotypes.

Müller Argoviensis (1881:339) described *Psychotria flavicans* Müll. Arg. and indicated the collection *Blanchet 3246*. At G there are two sheets of *Blanchet 3246*, sheet No. 1 has a label handwritten by Müller Argoviensis “*C. flavicans* Müll. Arg., scripsit Mull. Arg.” which is here designated as the lectotype; the second sheet is an isolectotype.

Steyermark (1972:604–608) recognized three varieties and three forms in *Psychotria hoffmannseggiana*, based on leaf shapes and vestiture. After careful analyses of more than 400 specimens across the geographic range, Delprete (2010:898–904) concluded that none of the characters have significant taxonomic meaning, and no subspecific rank is here recognized.

41. *Palicourea humboldtiana* (Cham.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis humboldtiana* Cham., *Linnaea* 4:136. 1829. *Psychotria humboldtiana* (Cham.) Müll. Arg. in Martius, Fl. Bras. 6(5):333. 1881. *Uragoga humboldtiana* (Cham.) Kuntze, Revis. Gen. Pl. 2:960. 1891. TYPE: VENEZUELA. AMAZONAS: Yavita, s.d., F.W.H.A. *Humboldt* [& J.A. Bonpland] s.n. (HOLOTYPE: B-W 4151).

Distribution.—Amazonian Colombia, Venezuela and Brazil, and a single collection from Central Suriname.

42. *Palicourea hypoides* (Benth.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria hypoides* Benth., J. Bot. (Hooker) 3:231. 1841. TYPE: GUYANA: Parima Mountains, s.d. [1839], *Rob. Schomburgk* s.n. (HOLOTYPE: K [K000174446]; ISOTYPE: G [G00300788]).

Distribution.—Only known by the type collection from Parima Mountains, Guyana.

43. *Palicourea imthurniana* (Oliv.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria imthurniana* Oliv. (as “*im Thurniana*”) in E.F. im Thurn, *Timehri* 5(2):196. 1886 [reimpr. in *Trans. Linn. Soc. London* 2(2):276, t. 42, f. 1–7. 1887]. TYPE: VENEZUELA: Mount Roraima, upper slopes, 7000 ft [= 2133 m], 10 Dec 1884, E.F. im Thurn 163 (first-step LECTOTYPE (Steyermark 1972:525); **second-step LECTOTYPE, here designated**: K [K000174444]; ISOLECTOTYPE: BM [BM000624201]).

Psychotria auyantepuensis Standl. ex Gleason & Killip, *Brittonia* 3:193. 1939. TYPE: VENEZUELA. BOLIVAR: Auyan-tepui, 1850 m, Dec 1937–Jan 1938, G.H.H. Tate 1291 (HOLOTYPE: F [No. 943373]; ISOTYPE: NY [00132602]).

Psychotria ptariensis Standl. & Steyer., *Fieldiana, Bot.* 28:604. 1953. *Psychotria imthurniana* f. *ptariensis* (Standl. & Steyer.) Steyer., *Mem. New York Bot. Gard.* 23:526. 1972. TYPE: VENEZUELA: BOLIVAR: Ptari-tepui, S-facing forested slopes between Rio Karuai and ridge below Misia Kathy Camp, 1250–1520 m, 27 Oct 1944, J.A. Steyermark 59440 (HOLOTYPE: F [No. 1182520]; ISOTYPE: NY [00132789]).

Distribution.—Forests of tepui slopes and summits of southern Venezuela and Guyana.

Notes.—Oliver (in E.F. im Thurn, 1886:196) described *Psychotria imthurniana* and cited two syntypes, *im Thurn* 163 and *im Thurn* 320. Steyermark (1972:525) cited as type for this taxon “*im Thurn* 163,” but without citing the herbarium where it is deposited, which is a first-step lectotypification. At K there is a sheet with both syntypes mounted on it, with different barcodes. The specimen with barcode K000174444 is here designated as the second-step lectotype for this taxon, and the syntype *im Thurn* 320, mounted on the same sheet, is K000174445.

44. *Palicourea iodotricha* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria iodotricha* Müll. Arg. in Martius, Fl. Bras. 6(5):375. 1881. *Petagomoa iodotricha* (Müll. Arg.) Bremek., *Recueil Trav. Bot. Néerl.* 31:295. 1934. TYPE: VENEZUELA. AMAZONAS: Casiquiari, Vasiva and Pacimoni Rivers, 1853–1854, R. Spruce 3274 (first-step LECTOTYPE (Steyermark 1972:644), **second-step LECTOTYPE, here designated**: G [00300844, sheet N. 1]; ISOLECTOTYPES: BM [BM000624167], BR [00000531578], E [E00285064], frag F [No. 729843], G [00300844, sheet N. 2], GH [00095173], K [2 sheets, K000174414, K000174415], MO [No. 1606100], P [P00837072], TCD [TCD0005775]).

Petagomoa atricapilla Bremek., *Recueil Trav. Bot. Néerl.* 31:296. 1934. *Psychotria iodotricha* subsp. *atricapilla* (Bremek.) Steyer., *Mem. New York Bot. Gard.* 23:646. 1972. TYPE: SURINAME: Forest Reserve Brownsberg, 9 Sep 1917, *Forestry Bureau, B.W.* 3319 (LECTOTYPE, **here designated**: U [U0006202]; ISOLECTOTYPE: U [U0006203]).

Psychotria iodotricha subsp. *multiflora* Steyer., *Mem. New York Bot. Gard.* 23:645. 1972. TYPE: BRAZIL. AMAZONAS: Maués, terra firme, 30 Nov 1946, J. Murça Pires 122 (HOLOTYPE: NY [00132706]).

Psychotria iodotricha subsp. *multibracteata* Steyer., *Mem. New York Bot. Gard.* 23:646. 1972. TYPE: BRAZIL. ACRE: Rio Jurua Basin, mouth of Rio Embira, tributary of Rio Tarauacá, 7°30'S, 70°15'W, 14 Jun 1933, B.A. *Krukoff* 4824 (HOLOTYPE: NY [00132705]; ISOTYPE: A [00095174]).

Distribution.—Venezuela, Guianas, Peru, Bolivia, and Brazil.

Notes.—Müller Argoviensis (1881:375–376) with the description of *Psychotria iodotricha* cited two syntypes, *Spruce* 3274 and *Spruce* 3397. Steyermark (1972:644) cited *Spruce* 3274 as the type of *Psychotria iodotricha*, without citing the herbarium of deposit, which is a first-step lectotypification. At G are two specimens of *Spruce* 3274, one with barcode 00300844, sheet No. 2, with dissected stipules, involuclral bracts and flowers, annotated by Müller Argoviensis; this sheet is here selected as the lectotype of this taxon. A second sheet at G, Sheet No. 1, without a barcode and not annotated by Müller Argoviensis, is an isolectotype. It should be noted that numbers 1 and 2 were written on the sheets to distinguish them from each other, and are not to be interpreted as labeling parts of the same specimen.

Bremekamp (1934:296) described *Petagomoa atricapilla* Bremek. and cited “*Forest Reserve Brownsberg*,

B.W. 3319” as the type, without citing the herbarium of deposit. At U are two sheets of “Forestry Bureau, B.W. 3319,” and the one with barcode U0006202 is here designated as lectotype, as it has the label in Bremekamp’s handwriting “*Pettagomoa atricapilla* Bremek.”

Steyermark (1972:644–646) recognized four subspecies in *Psychotria iodotricha* based on number of bracts and flowers per head and degree of pubescence, but these characters form a continuous gradient, and these subspecies were not recognized by Taylor and Steyermark (2004:742–743), as well as in this treatment.

45. *Palicourea jenmanii* (Wernham) C.M. Taylor, *Novon* 24:71. 2015. *Cephaelis jenmanii* Wernham, *J. Bot.* 52:313. 1914, non *Psychotria jenmanii* Urb. (1913). TYPE: GUYANA: Potaro River, Sheenabowa [now Chenapou Village], Sep–Oct 1881, G.S. Jenman 1291 (HOLOTYPE: K [K000174490]).

Psychotria mazaruniensis Standl., *Bull. Torrey Bot. Club* 67:298. 1940. TYPE: GUYANA: Upper Mazaruni River, Kurupung Mountain, near Makreba Falls, 13 Sep 1933, A.S. Pinkus 14 (HOLOTYPE: F [No. 992136]); ISOTYPES: G [G00300565], GH [00095183], MO [No. 1174904], NY [00132738], S [No. S05-1097], US [2 sheets, 00138860, 00637376].

Distribution.—Roraima Massif in Guyana and northernmost Brazil (state of Roraima), and lowland French Guiana.

46. *Palicourea justiciifolia* (Rudge) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis justiciifolia* Rudge, *Pl. Guian.* 28, pl. 43. 1805. *Psychotria rudgei* Bremek. (based on *Cephaelis justiciifolia* Rudge), *Recueil Trav. Bot. Néerl.* 31:301. 1934, non *Psychotria justiciifolia* Standl. (1931). TYPE: FRENCH GUIANA: without locality, s.d., J. Martin s.n. (HOLOTYPE: BM [BM001008949]).

Patabea alba Kunth in Humb. & Bonpl., *Nov. Gen. Sp.* 3:375. 1819, non *Psychotria alba* Ruiz & Pav. (1799). *Cephaelis cymosa* Spreng., *Syst. Veg.* 1:749. 1825 (based on *Patabea alba* Kunth). TYPE: VENEZUELA. AMAZONAS: Río Orinoco, Maipures and San Fernando de Atabapo, s.d., F.W.H.A. Humboldt & J.A. Bonpland s.n. (HOLOTYPE: P n.v. [not at P-Bonpl.]).

Psychotria maypurensis Humb. & Bonpl. ex Roem. & Schult., *Syst. Veg.* 5:190. 1819. *Psychotria lupulina* var. *maypurensis* (Humb. & Bonpl. ex Roem. & Schult.) Steyermark, *Mem. New York Bot. Gard.* 23:634. 1972. TYPE: VENEZUELA. AMAZONAS: Río Orinoco, Maipures, s.d., F.W.H.A. Humboldt & J.A. Bonpland s.n. (HOLOTYPE: B-W 04080-01; ISOTYPE: P [barcode unknown], not at P-Bonpl.).

Psychotria nervosa Benth., *J. Bot. (Hooker)* 3:229. 1841, nom. illeg., non *Psychotria nervosa* Sw. (1788). TYPE: GUYANA: “Low marshes of the Essequibo [River],” s.d. [1836], *Rob. Schomburgk, ser. I, 26 pro parte* “in the earlier sets” (LECTOTYPE, **here designated**: K [K000174322]; ISOLECTOTYPE: PH [00022497]).

Psychotria leucophaea Poepp., *Nov. Gen. Sp. Pl.* 3:33. 1843 [1845]. TYPE: BRAZIL. AMAZONAS: “Ega” [now Tefé], 1834, E.F. Poeppig 2545 (LECTOTYPE, **here designated**: W [No. W0048989]; ISOLECTOTYPES: G [G00300486], W [2 sheets, No. W0048988, No. 1889-0105843]).

Psychotria lupulina Benth., *J. Bot. (Hooker)* 3:230. 1841. TYPE: GUYANA: without locality, s.d. [1836], *Rob. Schomburgk, Ser. I, 26 pro parte* “in the later sets” (LECTOTYPE, **here designated**: BM [BM001008948]; ISOLECTOTYPES: BR [00000531573], E [2 sheets, E00285066, E00505324], F [No. 734131], G [2 sheets, G00300487, G00300593], GH [00095189], TCD [TCD0005769], U [U0006214]).

Psychotria langsdorffiana Müll. Arg., *Flora* 59:541, 545. 1876. TYPE: BRAZIL. Rio de Janeiro, s.d. [1813–1820], G.H. Langsdorff s.n. (LECTOTYPE, **here designated**: G [G00300473]; ISOLECTOTYPES: frag [ex G] F [No. 729889, No. 766943]).

Psychotria persimilis Müll. Arg., *Flora* 59:541, 545. 1876. TYPE: BRAZIL. AMAZONAS: Panuré, Rio Uaupés, Oct 1852–Jan 1853, R. Spruce 2516 (LECTOTYPE, **here designated**: G [G00300541]; ISOTYPES: BM [BM000624161], BR [00000531605], C n.v., GH [00095193], K [K000174324], MO [No. 1620484], NY [00132776]).

Psychotria rhodoleuca Müll. Arg., *Flora* 59:541, 545. 1876. *Psychotria lupulina* subsp. *rhodoleuca* (Müll. Arg.) Steyermark, *Mem. New York Bot. Gard.* 23:633. 1972. TYPE: VENEZUELA. AMAZONAS: Río Negro, San Carlos, s.d. [1853–1854], R. Spruce 3674 (first-step LECTOTYPE (Steyermark 1872:633), **second-step LECTOTYPE, here designated**: BM [BM000624160]; ISOLECTOTYPES: BR [00000531568], E [E00285067], GH [00095200], MO [No. 1612197], NY [00132796], P [P02428054]).

Psychotria contracta Müll. Arg. in Martius, *Fl. Bras.* 6(5):330. 1881. TYPE: BRAZIL. AMAZONAS: Río Negro, Manaus, Sep 1851, R. Spruce 1814 (first-step LECTOTYPE (Steyermark 1972:599); **second-step LECTOTYPE, here designated**: M [M-0188885]; ISOLECTOTYPES: BM [BM000624157], K [2 sheets, K000174374, K000174375]).

Psychotria tarapotensis Standl., *Publ. Field Mus. Nat. Hist., Bot. Ser.* 8(5):377. 1931. TYPE: PERU. SAN MARTIN: Tarapoto, 750 m, Dec 1929, L.L. Williams 5888 (HOLOTYPE: F [No. 614224]; ISOTYPES: G [G00300540], GH [00095221], K [K00043947] US [00146626]).

Psychotria flavovirens Suess., *Rev. Sudam. Bot.* 7(6):168. 1943. TYPE: VENEZUELA. AMAZONAS: Río Orinoco, Tamatama, 7 Oct 1928, P. Luetzelburg 22329 (LECTOTYPE, **here designated**: M [M-0188999]; ISOLECTOTYPE: M [M-0189000]).

Psychotria lupulina f. *pubens* Steyermark, *Mem. New York Bot. Gard.* 23:634. 1972. TYPE: VENEZUELA. BOLIVAR: Cerro Cotorra (El Vigia), S side of Río Paragua, between La Paragua and San Pedro de Las Bocas, 350 m, 5 Aug 1960, J.A. Steyermark 86861 (HOLOTYPE: VEN n.v.).

Distribution.—Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Bentham (1841:229–230) described *Psychotria nervosa* Benth. citing “On marshes of the Essequibo [River], Schomburgk n. 26, in the earlier sets” and described *P. lupulina* Benth. citing “British Guiana,

Schomburgk, n. 26, in the later sets.” This is quite confusing as “*Schomburgk n. 26*” is the type for both taxa, and it is not clear what Bentham meant by “in the earlier sets” and “in the later sets.” Therefore we made the arbitrary decision of selecting the specimens with a label reporting “Essequibo [River]” as the types of *Psychotria nervosa* Benth., and those with “Guyana [without locality]” as the types of *P. lupulina* Benth. The two taxa are synonymous, so the selection of their lectotypes does not alter the definition of the species. A specimen at BM, BM001008948, is here designated as the lectotype of *P. lupulina*, and a specimen at K, barcode K000174322, with the handwriting “26 - Low marshes of the Essequibo – British Guiana, Schomburgk 1836” is here designated as the lectotype of *P. nervosa*. In addition, Bentham (1841) was probably not aware that the name *Psychotria nervosa* Sw. had already been used by Swartz (1788:43) to describe another species; therefore *Psychotria nervosa* Benth. is a later homonym and illegitimate.

Müller Argoviensis (1876:541, 545) described *Psychotria langsdorffiana* Müll. Arg. and cited two syntypes from southern Brazil: *Langsdorff s.n.* collected in Rio de Janeiro, and *Riedel s.n.* collected in São Carlos. The specimen G00300473 has a handwritten label reporting “Rio de Janeiro: Langsdorff,” and is here designated as the lectotype of this taxon.

Müller Argoviensis (1876:541, 545) described *Psychotria rhodoleuca* Müll. Arg. and cited two syntypes: *Spruce 3674*, collected in San Carlos, Rio Negro, Amazonas, Venezuela, and *Riedel s.n.*, collected at an unknown locality in Brazil. Steyermark (1972:633) cited the type of this taxon as *Spruce 3674*, without citing the herbarium of deposit, which is a first-step lectotypification. The specimen with barcode BM000624160 is here selected as the second-step lectotype of this taxon.

Müller Argoviensis (1881:330–331) described *Psychotria contracta* Müll. Arg. and cited two syntypes: Amazonas, Rio Negro, Manaus, *Spruce 1814*; and Pará, without locality, *Martius s.n.* Steyermark (1972:599) cited the type of this taxon as “Prope Barra, Prov. Rio Negro, Amazonas, Brazil, Sept. 1851, *Spruce 1814*” but without indicating the herbarium of deposit, and this is a first-step lectotypification. At M there is a specimen of *Spruce 1814*, barcode M-0188885, with the printed label “Prope Barra [now Manaus], Prov. Rio Negro, coll. R. Spruce, Sept. 1851” and with the handwriting “1814 – *Psychotria*.” This specimen is here designated as the second-step lectotype of this taxon.

Steyermark (1972:631–635) recognized two subspecies, two varieties, and two forms within *Psychotria lupulina*, based principally of leaf and bract shapes, whereas, Taylor and Steyermark (2004:744–746) maintained only two subspecies. However, after an analysis of these characters on more than 300 specimens throughout the distribution of this species, Delprete (2010:909–913) concluded that these characters widely overlap (mostly in Central Brazil) and have no geographic correlation. Therefore, no subspecific taxa are recognized in this species.

47. *Palicourea kaieteurensis* (Wernham) C.M. Taylor, *Novon* 24:71. 2015. *Cephaelis kaieteurensis* Wernham, J. Bot. 52:313. 1914. *Psychotria appuniana* Steyermark, Mem. New York Bot. Gard. 23:660. 1972 (based on *Cephaelis kaieteurensis* Wernham), non *Psychotria kaieteurensis* Sandwith (1940). TYPE: GUYANA: Demerara, Kaieuteur Falls, 1872, C.F. Appun s.n. (HOLOTYPE: BM [BM001009104]).

Distribution.—Only known from central Guyana.

48. *Palicourea longicuspis* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria longicuspis* Müll. Arg., *Flora* 59:549, 552. 1876. TYPE: BRAZIL. AMAZONAS: Rio Uaupes, prope Panuré, Oct 1852–Jan 1853, R. *Spruce 2871* (LECTOTYPE, here designated: BR [000005315772]; ISOLECTOTYPES: frag G [G00300481], K [2 sheets, K000174301, K000174302], P [P00837095]).

Psychotria cincta Standl., Publ. Field Columbian Mus., Bot. Ser. 7:90. 1930. TYPE: COLOMBIA. EL VALLE: Dagua Valley, Córdoba, 80–100 m, 6 & 8 Mar 1922, E.P. Killip 5140 (HOLOTYPE: US [00138706, No. 1141369]; ISOTYPES: frag F [No. 587107], GH [00095151], NY [00132643], PH [00022471]).

Distribution.—Colombia, Venezuela, Guyana, Ecuador, Peru, and Amazonian Brazil.

Notes.—Müller Argoviensis (1876:549, 552) described *Psychotria longicuspis* Müll. Arg. citing the collection “Rio Uaupes, prope Panure: *Spruce n. 2871*” without mentioning the herbarium of deposit. A BR specimen, barcode 000005315772, is here selected as lectotype.

49. *Palicourea maguireorum* (Steyerm.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria bracteata* var. *latifolia* Müll. Arg. in Martius, Fl. Bras. 6(5):313, t. 49, f. 2. 1881. *Psychotria maguireorum* Steyerm., Mem. New York Bot. Gard. 23:625, f. 84. 1972 (based on *Psychotria bracteata* var. *latifolia* Müll. Arg.). TYPE: VENEZUELA. AMAZONAS: Casiquiari, Vasiva and Pacimoni Rivers, 1853–1854, R. Spruce 3440 (LECTOTYPE, **here designated**: G [G00300544]; ISOLECTOTYPES: BR n.v., NY [00132618], US [00138678]).

Psychotria bracteata var. *intermedia* Müll. Arg. in Martius, Fl. Bras. 6(5):312. 1881. TYPE: BRAZIL. AMAZONAS: Rio Negro, 1840, Rob. Schomburgk, ser. I, 861 (LECTOTYPE, **here designated**: US [00138678]; ISOLECTOTYPES: K [K000174333], frag G [G00300543]).

Psychotria bracteata var. *tenuifolia* Müll. Arg. in Martius, Fl. Bras. 6(5):313. 1881. TYPE: BRAZIL. AMAZONAS: “prope Barra” [now Manaus], Oct 1851, R. Spruce 1847 (first-step LECTOTYPE (Steyermark 1972:625); **second-step LECTOTYPE, here designated**: G [G00300545]; ISOLECTOTYPES: G [G00300546], M [M-0188900], MO [No. 1612145], P [P00836980]).

Distribution.—Venezuela, Guyana, and Amazonian Brazil.

Notes.—Müller Argoviensis (1881:312) described *Psychotria bracteata* var. *latifolia* Müll. Arg., and cited a collection with multiple localities as “Alto do Amazonas ad flumina Casiquiari, Vasiva et Pacimoni: Spruce 3440.” The specimen at G, barcode G00300545, with the handwritten label “P. bracteata δ latifolia Müll. Arg. – scripsit Müll. Arg.” is here designated as the lectotype of this taxon.

Müller Argoviensis (1881:312) described *Psychotria bracteata* DC. var. *intermedia* Müll. Arg. and cited two syntypes “secus Rio Negro ad Manáos: Spruce n. 1847 et inter Manáos et Barcellos: Spruce n. 1894.” Steyermark (1972:625) cited “AMAZONAS: Prope Barra, Prov. Rio Negro, Oct 1851, Spruce 1847” as the type of this taxon, without citing the herbarium of deposit, which is a first-step lectotypification. The specimen Spruce 1847 at G, barcode G00300545, is here designated as the lectotype of this taxon.

Müller Argoviensis (1881:313) described *Psychotria bracteata* DC. var. *tenuifolia* Müll. Arg. and cited a collection with multiple localities as “Alto do Amazonas ad flumina Casiquiari, Vasiva et Pacimoni: Spruce 3440.” The specimen at G, barcode G00300545, with the handwritten label “P. bracteata δ latifolia Müll. Arg. – scripsit Müll. Arg.” is here selected as the lectotype of this taxon.

Taylor and Steyermark (2004:746) accurately wrote, “*P. maguireorum* is a handsome species, with the inflorescence bracts and/or axes quite colorful: pink, magenta, or red-purple to orange-maroon.”

50. *Palicourea microbotrys* (Ruiz ex Standl.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria microbotrys* Ruiz ex Standl., Publ. Field Columbian Mus., Bot. Ser. 8:204. 1930. TYPE: PERU. LORETO: Amazon River, La Victoria, 31 Aug 1929, Ll. Williams 2983 (HOLOTYPE: F [No. 608877]).

Psychotria palicouroides Müll. Arg. in Martius, Fl. Bras. 6(5):305. 1881, nom. illeg., non *Psychotria palicouroides* Mart. (1841). Collection cited: BRAZIL: without locality, s.d., Martius s.n. (G [G00300796], M [M-0189146]).

Psychotria surinamensis Bremek., Recueil Trav. Bot. Néerl. 31:302. 1934, **syn. nov.** TYPE: SURINAME: Emma Range, 10 Mar 1922, J.W. Gonggrijp & G. Stahel s.n. (B.W. 5735) (LECTOTYPE, **here designated**: U [U0006248]; ISOLECTOTYPE: U [U0006247]).

Psychotria veraguensis Dwyer, Ann. Missouri Bot. Gard. 67:438. 1980. TYPE: PANAMA. Veraguas: road between Escuela Agrícola Alto Piedra and Rio Dos Bocas, 530–620 m, 26 Jul 1974, T. Croat 25871 (HOLOTYPE: MO [No. 2204045]).

Distribution.—Central America, Colombia, Venezuela, Guianas, Ecuador Peru, Bolivia, and Brazil.

51. *Palicourea muscosa* (Jacq.) Delprete & J.H. Kirkbr., **comb. nov.** *Morinda muscosa* Jacq., Select. Stirp. Amer. Hist. 1:65. 1763. *Cephaelis muscosa* (Jacq.) Sw., Prodr. 46. 1788. *Tapogomea muscosa* (Jacq.) Poir. in Lamarck, Encycl. 7:587. 1806. *Psychotria muscosa* (Jacq.) Steyerm., Mem. New York Bot. Gard. 23:671. 1972. **Lectotype, here selected**: Jacquín, Select. Stirp. Amer. Hist. 2:tab. 45.

Psychotria muscosa subsp. *breviloba* Steyerm., Mem. New York Bot. Gard. 23:672. 1972. TYPE: TRINIDAD: Heights of Aripo, 10–26 Jan 1922, W.E. Broadway 9823 (HOLOTYPE: NY [00132749]; ISOTYPES: GH [00095121], K [K000174205], US [00138880]).

Cephaelis kennedyae Dwyer, Ann. Missouri Bot. Gard. 67:75. 1980. TYPE: PANAMA: 6 km above the Panamerican Highway on the road from El Llano to Carti-Tupile, ca. 200 m, 18 Oct 1972, H. Kennedy 1779 (HOLOTYPE: MO [No. 2161974]; ISOLECTOTYPES: BM [2 sheets, BM000522187, BM000906005], MEXU [MEXU01326858], PMA [No. 037595]).

Distribution.—Central America, Colombia, Lesser Antilles, Venezuela, and Guianas.

Notes.—After an extensive search at W for original material of *Morinda muscosa* Jacq., no specimen was found. Plate 45 of Jacquín’s *Selectarum Stirpium Americanarum Historia* was drawn by the author, and is sufficiently clear to depict the main characteristics of the species, and is here designated as the lectotype of *Morinda muscosa*.

Steyermark (1972:671–673) recognized two subspecies in *Psychotria muscosa*, using the variation in length of stipule lobes, calyx lobes, and bracts and type of vestiture. The two subspecies are mostly geographically distinct, but their morphological and geographical ranges overlap in Trinidad and Tobago, as already pointed out by Steyermark. For these reasons, no subspecific taxa are recognized in this species.

52. *Palicourea oblita* (Wernham) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria oblita* Wernham, J. Bot. 52:314. 1914. TYPE: GUYANA: Mount Roraima, 1863–1864, C.F. Appun 1103 (first-step LECTOTYPE (Steyermark 1972:595); **second-step LECTOTYPE, here designated:** K [K000174486]).

Palicourea roraimae Standl., Field Mus. Nat. Hist., Bot. Ser. 17:280. 1937. TYPE: VENEZUELA. BOLIVAR: Mount Roraima, 2300 m, Dec 1909, E. Ule 8765 (HOLOTYPE: MG [No. 13796]; ISOTYPE: frag F [No. 895497]).

Distribution.—Tepui summits of southern Venezuela and Guyana.

Notes.—Wernham (1914:315) described *Psychotria oblita*, and cited three collections from Mount Roraima (Guyana): Appun 1103, Schomburgk 1018 B, and im Thurn 185, with specimens at BM and K. Steyermark (1972:595–596) cited Appun 1103 as the type, but not the herbarium of deposit, which is a first-step lectotypification. A sheet is preserved at K with two collections, im Thurn 185 and Appun 1103, mounted on it, and identified by different barcodes. The specimen of Appun 1103 preserved at K, barcode K000174486, is here designated as the second-step lectotype of *P. oblita*.

53. *Palicourea oblonga* (DC.) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis oblonga* DC., Prodr. 4:535. 1830. *Uragoga oblonga* (DC.) Kuntze, Revis. Gen. Pl. 2:961. 1891. *Gamotopa oblonga* (DC.) Lemée, Fl. Guyane Franç. 3:554. 1953. *Psychotria oblonga* (DC.) Steyermark, Mem. New York Bot. Gard. 23:673. 1972. TYPE: FRENCH GUIANA: without locality, s.d., Collector Unknown s.n. (LECTOTYPE, **here designated:** G-DC! [without barcode]).

Distribution.—Mountain forests of southern Venezuela, Guianas, and northernmost Brazil.

54. *Palicourea pakaraimensis* (Steyerm.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria pakaraimensis* Steyerm., Mem. New York Bot. Gard. 23:509, f. 71. 1972. TYPE: GUYANA: Pakaraima Mts., Mount Ayanganna, 1000–1500 m, 5–6 Feb 1955, B. Maguire et al. 40573 (HOLOTYPE: NY [00132759]; ISOTYPE: VEN [No. 82228]).

Distribution.—Only known from a few higher elevation collections from Guyana.

Notes.—Steyermark (1972:511) stated that “This species is related to *P. longicuspis* Müll. Arg, from which it differs in the truncate stipular sheath without elongate, aristate teeth, much fewer lateral axes of the inflorescence, and fewer (5–6) pairs of lateral nerves of the leaf blades.”

55. *Palicourea phaneroloma* (Standl. & Steyerm.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria phaneroloma* Standl. & Steyerm. in Steyerm. and Collaborators, Fieldiana, Bot. 28:604. 1953. TYPE: VENEZUELA: BOLIVAR: Gran Sabana, S of Mount Roraima, tributary of Río Kukenan, 1005–1065 m, 2 Oct 1944, J.A. Steyermark 59117 [cited as 58117] (HOLOTYPE: F [No. 1181450]; ISOTYPES: NY [00132779], US [2 sheets, 00138916, 00138917], VEN [No. 15879]).

Psychotria phaneroloma var. *angustior* Steyerm., Mem. New York Bot. Gard. 23:591. 1972. TYPE: VENEZUELA. BOLIVAR: Río Pauo, affluent of Río Caura, 390 m, Jan 1963, F. Cardona Puig 2967 (HOLOTYPE: VEN [No. 54654]).

Distribution.—Southern Venezuela, Guyana, and Brazil.

Notes.—Standley & Steyermark (in Steyermark et al. 1953:604) cited the type of *Psychotria phaneroloma* as “Steyermark 58117.” The locality and collection date cited in the protologue correspond entirely with those of the specimen labels; however, the type specimens of this taxon have the collection number “59117,” and the type citation is to be corrected accordingly. The two varieties recognized by Steyermark (1972:590–591) based on leaf shape are not recognized here.

56. *Palicourea plocamipes* (Wernham) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria plocamipes* Wernham, J. Bot. 52:316. 1914. TYPE: GUYANA: without locality, s.d., [Rich. or Rob.?] Schomburgk s.n. (HOLOTYPE: K [K000174482]).

Distribution.—Only known from higher elevations of Guyana.

Notes.—As Steyermark (1972:511) noted, “This species differs from *P. pakaraimensis* Steyerm. in the pubescent hypanthium, shorter inflorescence with shorter dichotomously branched axes, more numerous nerved leaf blades, and absence of striolate tertiary venation.”

57. *Palicourea polycephala* (Benth.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria polycephala* Benth., J. Bot. (Hooker) 3:231. 1841. TYPE: GUYANA: without locality, 1836, *Rob. Schomburgk, ser. I, 139* (first-step LECTOTYPE (Steyermark 1972:591); **second-step LECTOTYPE, here designated:** K [K000174377]; ISOLECTOTYPES: BM n.v., G [2 sheets, G00300397, G00300398], NY [00132785], frag F [No. 729835]).

Psychotria racemifera Standl., Publ. Field Columbian Mus., Bot. Ser. 8:71. 1930. TYPE: VENEZUELA. ZULIA: Perijá Exploration Company, along Lora River, above Camp 2, 14 Dec 1922, *H. Pittier 10958* (HOLOTYPE: US [00138946]; ISOTYPES: NY [00132792], G [G00300399]).

Distribution.—Colombia, Venezuela, Guyana, Peru, and Brazil.

Notes.—Bentham (1841:231) described *Psychotria polycephala* Benth. and cited two syntype gatherings “British Guiana, *Schomburgk, n. 139*, and Rio Negro, *n. 942*.” Steyermark (1972:591) cited as type of this taxon “British Guiana, *Robert Schomburgk 139*,” which is a first-step lectotypification. The specimen at K, with barcode K000174377 is here selected as second-step lectotype.

58. *Palicourea potaroensis* (Sandwith) Delprete & J.H. Kirkbr., **comb. nov.** *Cephaelis potaroensis* Sandwith, Hooker's Icon. Pl. 33:t. 3300. 1935. *Psychotria potaroensis* (Sandwith) Steyermark, Mem. New York Bot. Gard. 23:662. 1972. TYPE: GUYANA: Potaro River, Waratuk Portage, 200 ft [= 60 m], Aug 1933, *T.G. Tutin 470* (LECTOTYPE, **here designated:** K [herbarium sheet K000174481 and spirit collection 14509.000]; ISOLECTOTYPES: BM n.v., U [U0006234]).

Distribution.—Guyana and French Guiana.

59. *Palicourea prancei* (Steyermark) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria prancei* Steyermark, Mem. New York Bot. Gard. 23:656. 1972. TYPE: BRAZIL. AMAZONAS: Reserva A. Ducke, Manaus–Itacotiara rd., km 27, 12 Dec 1968, *G.T. Prance et al. 9015* (HOLOTYPE: NY [00132786]; ISOTYPES: BISH [BISH1004667], K [K000174480], MO [No. 3386989], P [P00837146], R [R000125993], S [No. S05-1124], U [U0006235], US [2 sheets, 00138940, 00997837], VEN [No. 79056]).

Distribution.—Suriname, French Guiana, and Amazonian Brazil.

60. *Palicourea pseudinundata* (Wernham) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria pseudinundata* Wernham, J. Bot. 52:315. 1914, non *Psychotria bracteata* F. Dietr. (1807:617), nec *Psychotria bracteata* DC. (1830:510), nom. illeg., nec *Psychotria bracteata* Wight & Arn. (1834:434), nom. illeg., nec *Psychotria bracteata* D. Dietr. (1839:735). TYPE: FRENCH GUIANA: Cayenne, 1857, *M. Melinon s.n.* (in *Herb. Sagot 1299*) (HOLOTYPE: K [K000174479]; ISOTYPE: P [P00836984]).

Distribution.—Suriname, French Guiana, and northern Brazil.

61. *Palicourea psittacina* (Steyermark) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria psittacina* Steyermark, Mem. New York Bot. Gard. 23:665. 1972. TYPE: GUYANA. Upper Mazaruni River Basin, Mount Ayanganna, NE side, 800–900 m, 2 Aug 1960, *S.S. Tillett et al. 45007* (HOLOTYPE: NY [00132787]; ISOTYPES: F [No. 1704838], K [K000174478], US [00138941], VEN [No. 82230]).

Distribution.—Only known by a few collections from Guyana.

62. *Palicourea pullei* (Bremek.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria pullei* Bremek., Recueil Trav. Bot. Néerl. 31:301. 1934. TYPE: SURINAME: Lower Saramacca River, Nov 1902, *A. Pulle 17* (LECTOTYPE, **here designated:** U [U0006236]; ISOLECTOTYPE: U [U0008424]).

Distribution.—Suriname, French Guiana, and Amazonian Brazil (Pará).

Notes: Bremekamp (1934:301) described *Psychotria pullei* Bremek. and cited the collection “Saramacca River, Pulle 17.” At U there are two specimens of *Pulle 17*. The most complete, with barcode U0006236, has a holotype label handwritten by Steyermark and is here designated as lectotype of this taxon.

63. *Palicourea racemosa* (Aubl.) Borhidi, Acta Bot. Hung. 53:247. 2011 [2012]. *Nonatelia racemosa* Aubl., Hist. Pl. Guiane 1:186, t. 72. 1775, emend A. Rich., Mém. Fam. Rubiac. 127. 1830. *Oribasia racemosa* (Aubl.) J.F. Gmel., Syst. Nat. 367. 1791. *Psychotria racemosa* (Aubl.) Raesch., Nomencl. Bot., ed. 3, 56. 1797, nom. illeg., non *Psychotria racemosa* Rich. (1792:107). TYPE: FRENCH GUIANA: Forest between Kaw and the Orapu River, “in sylvis Orapu,” s.d. [1762–1764], *J.B.C.F. Aublet s.n.* (LECTOTYPE (Lanjouw & Uittien 1940:154): P-JJR 8: 271C).

Psychotria racemosa Rich., Actes Soc. Hist. Nat. Paris 1:107. 1792. TYPE: FRENCH GUIANA: without locality, s.d., *L.C.M. Richard s.n.* (NEOTYPE: P [barcode unknown], designated by Kirkbride (1997:370, figs. 7–8).

Psychotria longistipula Benth., J. Bot. (Hooker) 3:227. 1841. TYPE: BRAZIL. AMAZONAS: Rio Negro, [Barcelos], s.d. [Dec 1839], *Rob. Schomburgk, ser. I, 945* (first-step LECTOTYPE (Steyermark 1972:543), LECTOTYPE, **here designated:** K [K000174266]; ISOTYPE: BM n.v.).

Distribution.—Mexico, Central America, Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and Brazil.

Notes.—Bentham (1841:227) cited the type of *Psychotria longistipula* Benth. as “Schomburgk, n. 948”; however, as already noted by Steyermark (1972:543), the correct collection number is “945.”

64. *Palicourea sandwithii* Delprete & J.H. Kirkbr., **nom. nov.** *Psychotria kaieteurensis* Sandwith, Kew Bull. 1939:552. 1940, non *Palicourea kaieteurensis* (Wernham) C.M. Taylor (2015; based on *Cephaelis kaieteurensis* Wernham). TYPE: GUYANA: Potaro River, top of Kaieteur Gorge, path descending to Tukeit, ca. 1000 ft [= 304 m], 7 Sep 1937, N.Y. Sandwith 1429 (first-step LECTOTYPE (Steyermark 1972:506), **second-step LECTOTYPE, here designated**: K [K000174495]; ISOLECTOTYPES: G [G00300790], NY [00132713], U [U0006208]).

Distribution.—Only known from Guyana.

65. *Palicourea schomburgkii* (Benth.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria schomburgkii* Benth., J. Bot. (Hooker) 3:231. 1841. TYPE: GUYANA: without locality, s.d. [1839], *Rob. Schomburgk 208.S* [cited by Steyermark (1972:592) as 2085] (first-step LECTOTYPE (Steyermark 1972:592), **second-step LECTOTYPE, here designated**: K [K000174475]; ISOLECTOTYPE: BM n.v.).

Psychotria chondroloma Standl., Publ. Field Columbian Mus., Bot. Ser. 7(4):440. 1931. TYPE: VENEZUELA. AMAZONAS: Summit of Mount Duida, 4400 ft [= 1341 m], Aug 1928–Apr 1929, G.H.H. Tate 726 (HOLOTYPE: NY [00132642]; ISOTYPES: F [No. 603527], frag G [G00300422]).

Distribution.—Venezuela, Guyana, and Amazonian Brazil.

Notes.—Bentham (1841:231) described *Psychotria schomburgkii* Benth. and cited “British Guiana, Schomburgk.” Steyermark (1972:592) cited the type of this taxon as “British Guiana, Robert Schomburgk 2085” without citing the herbarium where it is deposited. According to van Dam (2002:98), this gathering is instead Robert Schomburgk additional collection series, and is number 208.S, which was collected in 1839. According to the Code (McNeill et al. 2012), this is an error that can be corrected, and Steyermark’s citation is a first-step lectotypification. The specimen of *Rob. Schomburgk 208.S* at K, barcode 000174475, is here designated as the second-step lectotype.

66. *Palicourea sessilis* (Vell.) C.M. Taylor, Novon 24:90. 2015. *Coffea sessilis* Vell., Fl. Flum. 64. 1829 [“1825”]. *Psychotria vellosiana* Benth., Linnaea 23:464. 1850. *Psychotria sessilis* (Vell.) Müll. Arg. in Martius, Fl. Bras. 6(5):358. 1881, *nom. illeg. et superfl.* (Art. 52.1 and 53.1), non *Psychotria sessilis* Vell. [1829 [“1825”] = *Rudgea sessilis* (Vell.) Müll. Arg.]. *Psychotria sessilis* var. *genuina* Müll. Arg. in Martius, Fl. Bras. 6(5):358. 1881, *nom. illeg.* (sub art. 24.3). TYPE: Fl. Flum. Icon. 2:tab. 20. 1831 (LECTOTYPE, designated by Taylor [2015a:90]).

Psychotria axillaris Vell., Fl. Flum. 67. 1829 [“1825”], *nom. illeg.* (later homonym, Art. 53); Vell., Icon. 2:tab. 32. 1831, non *Psychotria axillaris* Willd. (1798:962), nec *Cephaelis axillaris* Sw. (1788:45). TYPE: Vell., Icon. 2:tab. 32. 1831 (LECTOTYPE, designated by C.M. Taylor [2015a:90]).

Cephaelis attenuata Miq., Linnaea 19:444. 1846. TYPE: BRAZIL. MINAS GERAIS: without locality, s.d. [1840], *P. Claussen 1219b* (LECTOTYPE, **here designated**: FI [No. FI-082315, barcode FI004832]).

Psychotria longipes Müll. Arg. in Martius, Fl. Bras. 6(5):354. 1881. TYPE: BRAZIL. RIO DE JANEIRO: Tijuca, 30 Nov 1872, A. Glaziou 6037 (LECTOTYPE, **here designated**: P [P00837098]; ISOLECTOTYPES: G [barcode unknown], P [2 sheets, P00837096, P00837097]).

Psychotria hancornifolia Benth., Linnaea 23:463. 1850. *Psychotria hancornifolia* var. *genuina* Müll. Arg. in Martius, Fl. Bras. 6(5):355. 1881, *nom. illeg.* (sub art. 24.3). *Psychotria sessilis* var. *hancornifolia* (Benth.) Steyermark, Mem. New York Bot. Gard. 23:715. 1972. TYPE: BRAZIL. MINAS GERAIS: Caldas, s.d., A.F. Regnell I, 171 *pro parte* (first-step LECTOTYPE (Steyermark 1972:715), second-step LECTOTYPE (C.M. Taylor 2015b:91): K [K001070963]; ISOLECTOTYPES: BR [2 sheets, 0000057313, 00000532627], G [G00436960], K [K001070962]).

Psychotria hancornifolia var. *brevifolia* Müll. Arg. in Martius, Fl. Bras. 6(5):355. 1881. TYPE: BRAZIL. MINAS GERAIS: Caldas, 21 Aug 1855, A.F. Regnell I, 171 *pro parte* (LECTOTYPE, **here designated**: R [R000026390]).

Psychotria hancornifolia var. *varifolia* Müll. Arg. in Martius, Fl. Bras. 6(5):356. 1881. TYPE: BRAZIL. MINAS GERAIS: without locality [Piranga], s.d. [Oct 1840], G. Gardner 4728 (first-step LECTOTYPE (Steyermark (1972:716); second-step LECTOTYPE (Taylor 2015b:91): K [K000174438]; ISOLECTOTYPES: K [K001070959], MO [No. 1606290], NY [00132685], R [R000148041], US [No. 1066910]).

Psychotria hancornifolia var. *longifolia* Müll. Arg. in Martius, Fl. Bras. 6(5):356. 1881. TYPE: BRAZIL. MINAS GERAIS: without locality, 1844, H.A. Weddell 889 (HOLOTYPE: G-DC [bar code not cited]; ISOTYPES: F [2 sheets, No. 1011972, No. 1011973], frag F (ex G-DC) [No. 729903]).

Psychotria hancornifolia var. *angustifolia* Müll. Arg. in Martius, Fl. Bras. 6(5):356. 1881. *Psychotria sessilis* var. *angustifolia* (Müll. Arg.) Steyermark, Mem. New York Bot. Gard. 23:716. 1972. TYPE: BRAZIL. RIO DE JANEIRO: Serra Tingua, s.d., J.B.E. Pohl 1913 (first-step LECTOTYPE (Steyermark 1972:716), second-step LECTOTYPE (Taylor 2015b:92): BR [00000532635]; ISOLECTOTYPES: G [G00436961], K [K000174379], NY [00132684]).

Psychotria velutipes Müll. Arg. in Martius, Fl. Bras. 6(5):356. 1881. *Uragoga velutipes* (Müll. Arg.) Kuntze, Revis. Gen. Pl. 2:963. 1891. *Psychotria hancornifolia* var. *velutipes* (Müll. Arg.) Smith & Downs, Sellowia 7:56, 90. 1956. TYPE: BRAZIL. RIO DE JANEIRO: [Petropo-

lis à Cachambu], 13 Nov 1874, A. Glaziou 7678 (LECTOTYPE (Taylor 2015b: 92): G [G00300461]; ISOLECTOTYPES: B†, K [K000174436], P [3 sheets, P02428028, P02428029, P02428030], RB [00356444]).

Psychotria interjecta Müll. Arg. in Martius, Fl. Bras. 6(5):357. 1881. *Uragoga interjecta* (Müll. Arg.) Kuntze, Revis. Gen. Pl. 2:960. 1891. TYPE: BRAZIL. São Paulo: Prope Taubaté & Mugi, s.d. [Nov 1833], L. Riedel 1506 (LECTOTYPE (Taylor 2015b:92): BR [00000532593]; ISOLECTOTYPES: BR [00000532658], F [No. 617765], K [K000174381], P [P00837071]).

Psychotria janeirensis Müll. Arg. in Martius Fl. Bras. 6(5):357. 1881. *Uragoga janeirensis* (Müll. Arg.) Kuntze, Revis. Gen. Pl. 2:960. 1891. TYPE: BRAZIL. RIO DE JANEIRO: without locality, s.d. [Apr 1875], A. Glaziou 7676 (LECTOTYPE (Taylor 2015b:92): BR [00000642872]; ISOLECTOTYPES: B†, F [No. 734103], G [2 sheets, G00074059, G00074060], K [K000174380], P [2 sheets, P0050184, P0050185], R [R000010399], RB [RB00356491], US [00138809]).

Psychotria sessilis var. *plumosa* Müll. Arg., in Martius, Fl. Bras. 6(5): 358. 1881. TYPE: BRAZIL. MINAS GERAIS: [Agua Quente], s.d., F. Sellow s.n. (LECTOTYPE, here designated: F (ex B) [No. 607160]; ISOLECTOTYPE: G [barcode unknown]).

Psychotria sessilis var. *glabrescens* Müll. Arg. in Martius, Fl. Bras. 6(5): 358. 1881. TYPE: BRAZIL. MINAS GERAIS: without locality, 1845, J.F. Widgren 1010 (LECTOTYPE, here designated: BR [00000532626]; ISOLECTOTYPE: G [barcode unknown]).

Psychotria caloneura Müll. Arg. in Martius, Fl. Bras. 6(5):359. 1881. *Uragoga caloneura* (Müll. Arg.) Kuntze, Revis. Gen. Pl. 2:959. 1891. TYPE: BRAZIL: without locality “Brasilia orientalis,” s.d., F. Sellow s.n. (LECTOTYPE, here designated: G [G00418073]; ISOLECTOTYPES: B†, frag and photo F (ex B) [No. 607055]).

Psychotria sororopanensis Standl. & Steyer., Fieldiana, Bot. 28:605. 1953, emend. Steyer., Mem. New York Bot. Gard. 17(1):435. 1967. *Palicourea sessilis* subsp. *sororopanensis* (Standl. & Steyer.) C.M. Taylor, Novon 24:92. 2015. TYPE: VENEZUELA. BOLIVAR: Sororopánpetui, 2130–2250 m, 15 Nov 1944, J.A. Steyermark 60175 (HOLOTYPE: F [No. 1182123]; ISOTYPE: US [00138990]).

Distribution.—From Venezuela, Guyana, throughout Brazil to Paraguay.

Notes.—Müller Argoviensis (1881:354–355) described *Psychotria longipes* Müll. Arg. and distinguished it from *P. hancorniifolia* by its long peduncles and a few trivial flower and fruit characters; all these characters range within the morphological variation of *Palicourea sessilis* (Vell.) C.M. Taylor as here delimited. In addition, he cited several syntypes from the states of São Paulo [Burchell 3670 (G!)] and Rio de Janeiro [Glaziou 695 (G!), 6037(G!)]. At P there are three sheets of Glaziou 6037, and the one with barcode P00837098 is here designated as the lectotype, as the label has a precise collection date and locality.

Müller Argoviensis (1881:356) described *Psychotria hancorniifolia* var. *variifolia* Müll. Arg. citing the following syntypes from Brazil: Minas Gerais, Gardner 4728 (G); Bahia, Serra Jacobina et Igreja Velha, Blanchet 3357 (G!); and, locality unknown, Leo Du Pasquier (G!). Steyermark (1972:716) discussed the features of this variety as, “dissection of flowers of the Gardner 4728 (referred by Müller-Argoviensis to *Psychotria hancorniifolia* var. *variifolia*) and other specimens from Minas Gerais show tetramerous flowers. Under *P. hancorniifolia* var. *variifolia*, Müller-Argoviensis describes the leaves [...] but an isotype collection (Gardner 4782) at NY has the leaves [...] and the photograph of the type collection at K [...]” This was interpreted by Taylor (2015b:91) as a lectotypification and she cited the barcode of the K specimen, which is a second-step lectotypification.

Müller Argoviensis (1881:356) described *Psychotria velutipes* Müll. Arg. citing the collection Glaziou 7678 from Rio de Janeiro, without indicating the herbarium of deposit. Taylor (2015b: 92) indicated a specimen at G with barcode G00300461 as holotype, which was a lectotypification.

Müller Argoviensis (1881:357) described *Psychotria janeirensis* Müll. Arg. citing the collection “Rio de Janeiro: Glaziou n. 7676” without indicating the herbarium of deposit. Taylor (2015b: 92) indicated the specimen Glaziou 7676 at BR, barcode 00000642872, as the holotype, which was a lectotypification.

Müller Argoviensis (1881:358) described *Psychotria sessilis* (Vell.) Müll. Arg. var. *plumosa* Müll. Arg. citing the following syntypes: “Prov. Minas Gerais: Claussen in herb. Van Heurck et in herb. DC [G!], Weddell n. 1530 in hb. DC [G!, 2 sheets]; ad Agua Quente, Sello [F. Sellow s.n.(G!).]” At F is a sheet, accession No. 607160, with the label “Herb. Reg. Berolinense, *Psychotria velloziana* var. *plumosa*, Brasilia, c. 1214, Sellow legit” which is here designated as lectotype of *P. sessilis* var. *plumosa*.

Müller Argoviensis (1881:358–359) described *Psychotria sessilis* (Vell.) Müll. Arg. var. *glabrescens* Müll. Arg. citing the following syntypes from southern Brazil: “Sello [F. Sellow] 846 [G!]; in prov. Minas Gerais: Widgren 1010 [BR!, G!].” The specimen of Widgren 1010 preserved at BR is here selected as the lectotype for this taxon.

Müller Argoviensis (1881:359) described *Psychotria caloneura* Müll. Arg. and cited the following collection “Habitat in Brasilia oriental: Sello.” At G there is a sheet with barcode G00418073, with a label reporting the same collection, and an envelope containing several loose leaves and inflorescence heads, which is here

designated as the lectotype. A specimen at F also has several loose leaves and inflorescence heads, complemented by the photo of the B specimen, which was destroyed.

Palicourea sessilis (Vell.) C.M. Taylor is an extremely variable species. Steyermark (1972:715–717, as “*Psychotria sessilis*”) attempted to quantify this ample morphological variation, recognizing 4 varieties, based mostly on peduncle length, leaf shapes, and general vestiture. As already concluded by Delprete et al. (2005:607–616, as “*Psychotria vellosiana*”) and Delprete (2010:969–975), these characters amply overlap, mostly in Central Brazil (Minas Gerais), and therefore no subspecific taxa are here recognized.

67. *Palicourea speluncae* (Standl. & Steyererm.) C.M. Taylor, Novon 24:76. 2015. *Psychotria speluncae* Standl. & Steyererm., Fieldiana, Bot. 28:606. 1953, emend. Steyererm., Mem. New York Bot. Gard. 17(1):436. 1967. TYPE: VENEZUELA. BOLIVAR: Parí-tepui, S-facing slope, cave rock above Cave Camp, 1810 m, 29 Oct 1944, J.A. Steyermark 59521 (HOLOTYPE: F [No. 1182101]; ISOTYPES: A [00095214], MO [No. 1297622], NY [00132825]).

Psychotria speluncae subsp. *brevicalyx* Steyererm., Mem. New York Bot. Gard. 17(1): 436. 1967. TYPE: VENEZUELA. AMAZONAS: Cerro de La Neblina, Río Yatua, near Cumbre Camp, 1700 m, 10 Jan 1954, B. Maguire 37148 (HOLOTYPE: NY [00132826]; ISOTYPE: VEN [No. 64079]).

Psychotria speluncae subsp. *exserta* Steyererm., Mem. New York Bot. Gard. 17(1): 436. 1967. TYPE: VENEZUELA. AMAZONAS: Cerro de La Neblina, Río Yatua, upper escarpment slopes E of Camp 3, 1700 m, 27 Dec 1952, B. Maguire 36921 (HOLOTYPE: NY [00132827]; ISOTYPES: K [K000432851], RB [00543677], U [0006244], VEN [No. 64084]).

Distribution.—Montane and premontane forests of southern Venezuela and Guyana.

Notes.—Steyermark (1967:436; 1972:710–711) divided *Psychotria speluncae* into three subspecies, which were later synonymized by Taylor and Steyermark (2004:757); a decision with which we concur.

68. *Palicourea subundulata* (Benth.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria subundulata* Benth., J. Bot. (Hooker) 3:227. 1841. TYPE: BRAZIL. AMAZONAS: Rio Negro, s.d., *Rob. Schomburgk, ser. I, 972* (first-step LECTOTYPE (Steyermark 1972:505), **second-step LECTOTYPE, here designated**: K [K000174297]; ISOLECTOTYPES: E [E00285074], F [2 sheets, No. 768474 (without collection number), No. 768475], G [G00300446], L [L0057955], NY [00132838], TCD [TCD0005762], US [00139002], frag F [No. 606970, No. 768473]).

Psychotria atabapoensis Standl., Publ. Field Columbian Mus., Bot. Ser. 8:190. 1930. TYPE: VENEZUELA. AMAZONAS: San Fernando de Atabapo, 14 Jan 1913, T. Koch-Grünberg B67 (HOLOTYPE: B†; LECTOTYPE, **here designated**: F [No. 612055]).

Distribution.—Venezuela, Guianas, and Brazil.

Notes.—The holotype specimen of *Psychotria atabapoensis* Standl. preserved at B was destroyed. To our knowledge, the only extant specimen known of this collection is at F, accession No. 612055, which is a fragment extracted from the Berlin specimen, consisting of only one leaf and a portion of an inflorescence, complemented by a photo of the B specimen, which is here designated as the lectotype of this taxon.

69. *Palicourea tapirapecoana* (Steyererm.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria tapirapecoana* Steyererm., Mem. New York Bot. Gard. 23:628. 1972. TYPE: BRAZIL. Roraima [“Amazonas” sic!]; Venezuela-Brazil boundary, orillas del Rio Castanho, afluente del Padauri que cae al Rio Negro y este ultimo al Amazonas, 100–140 m, 16–24 Feb 1946, F. Cardona Puig 1496 (HOLOTYPE: VEN [No. 72099]). PARATYPES: VENEZUELA. AMAZONAS: Venezuela-Brazil boundary, Sierra Parima, ca. 64°38' W, 1°22' N, headwaters of Rio Siapa and Rio Padauri, Boundary Post No. 4, 1340 m, 8 Apr 1946, F. Cardona Puig 1496 (F [No. 1907806], US [No. 1907806]). Although the F and US specimen of *Cardona Puig 1496* have the same collection number as the holotype at VEN, they are paratypes because they were collected on a different date, at a different locality.

Distribution.—Border region of southern Venezuela, Guyana and Brazil.

70. *Palicourea tatei* (Standl.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria tatei* Standl., Publ. Field Columbian Mus., Bot. Ser. 7(4):460. 1931, non *Cephaelis tatei* Standl. (1929). *Psychotria everardii* subsp. *tatei* (Standl.) Steyererm., Mem. New York Bot. Gard. 23:540. 1972. TYPE: VENEZUELA. AMAZONAS: Mount Duida, summit, Central Camp, 4800 ft [= 1463 m], 28 Dec 1928–1 Jan 1929, G.H.H. Tate 568 (HOLOTYPE: NY [00132842]; ISOTYPES: F [No. 603545]). The specimens at NY and F bear the collection date of 28 Dec 1928–1 Jan 1929 and the same label data. A specimen at US [00146627] has the same collection number, but a different collection date of 1–4 Jan 1929 and label, and therefore is a paratype.

Psychotria breweri Steyererm., Acta Bot. Venez. 14(3):25, f. 14. 1984. TYPE: VENEZUELA. AMAZONAS: Depto. Atabapo, Cerro Duida, summit, cerca de la escarpa oriental, 3°25'N, 65°40'W, 1230 m, 10 Feb 1982, J.A. Steyermark et al. 126381 (HOLOTYPE: VEN [No. 82525]; ISOTYPE: NY [00132624]).

Distribution.—Tepui scrub and meadows of Venezuela (Cerro Duida, Cerro Marahuaka) and Guyana.

71. *Palicourea tenerior* (Cham.) Delprete & J.H. Kirkbr., **comb. nov.** *Patabea tenerior* Cham., *Linnaea* 9:236. 1834. *Psychotria tenerior* (Cham.) Müll. Arg. in Martius, *Fl. Bras.* 6(5):331. 1881. TYPE: BRAZIL: without locality, s.d., *F. Sellow s.n.* (B†; LECTOTYPE, here designated: K [K000015435]; probable ISOLECTOTYPE: G [G00439809]).

Nonatelia officinalis Aubl., *Hist. Pl. Guiane* 1:182, t. 70, f. 1. 1775, non *Palicourea officinalis* Mart. (in Spix & Mart. 1828). *Oribasia officinalis* (Aubl.) J.F. Gmel., *Syst. Nat.* 367. 1791. *Psychotria officinalis* (Aubl.) Raeusch., *Nomencl. Bot.* 55. 1797, nom. nud. *Psychotria involuocrata* Sw. (1797), nom. superfl., non *Cephaelis involuocrata* Willd. (1798), nom. superfl., nec *Psychotria involuocrata* Willd. ex DC. (1830). *Psychotria officinalis* (Aubl.) Raeusch. ex Sandwith, *Kew Bull.* 1931:473. 1931. *Palicourea swartziana* Borhidi, *Acta Bot. Hung.* 53:247. “2011” [2012]. TYPE: FRENCH GUIANA: trail margins of Cayenne and French Guiana, “habitat Caienne in locis sterilibus,” s.d. [1762–1764], *J.B.C.F. Aublet s.n.* (LECTOTYPE [Lanjouw & Uittien 1940:154]: P-JJR 8: 271A).

Psychotria villosa Vell., *Fl. Flum.* 67. 1829 [“1825”], nom. illeg., non *Psychotria villosa* Ruiz & Pav. (1799). TYPE: LECTOTYPE, here designated, Vell., *Fl. Flum. Icon.* 2:f. 33. 1831.

Cephaelis microcephala Miq., *Linnaea* 18:748. 1844 [1845], nom. illeg., non *Cephaelis microcephala* Humb. & Bonpl. ex Roem. & Schult. (1819). *Psychotria microcephala* Miq., *Stirp. Surinam Select.* 180. 1851, non *Psychotria microcephala* Müll. Arg. (1881), nom. illeg. TYPE: SURINAME: Paramaribo, Mar–Apr 1844, A. Kappler 1562 (first-step LECTOTYPE [Steyermark 1972:605]; second-step LECTOTYPE, here designated: U [U0006198]; ISOLECTOTYPE: MO [No. 124059]).

Psychotria erythrophylla Müll. Arg., *Flora* 59:542, 546. 1876. *Psychotria hoffmannseggiana* var. *erythrophylla* (Müll. Arg.) Steyer., *Mem. New York Bot. Gard.* 23:607. 1972. TYPE: VENEZUELA. AMAZONAS: “Río Casiquiari, Río Vasiva and Río Pacimoni” [In Vasiva ripis], Jan 1854, R. Spruce 3439 (LECTOTYPE [Steyermark 1972:608]: K [K000432844]; ISOLECTOTYPES: BR [00000531613], G [G00300757], frag NY [00132666]).

Psychotria barbiflora var. *amazonica* Müll. Arg. in Martius, *Fl. Bras.* 6(5):330. 1881. TYPE: BRAZIL. PARÁ: Near Santarem, May 1850 (fr), R. Spruce 630 (first-step LECTOTYPE [Steyermark 1972:606]; second-step LECTOTYPE, here designated: K [K000174364]).

Psychotria officinalis subsp. *wilhelmimensis* Steyer., *Mem. New York Bot. Gard.* 23:615. 1972. TYPE: SURINAME: Wilhelmina Geberte, Juliana Top, 3°36–41'N, 56°30–34'W, 1200 m, 2 Aug 1963, B. Maguire *et al.* 54440 (HOLOTYPE: NY [00132755]; ISOTYPE: U [U0006228]).

Distribution.—Lowlands of Colombia, Venezuela, Guianas, and Brazil.

Notes.—Miquel (1844 [1845]:748) described *Cephaelis microcephala* Miq. without indicating a specimen. Steyermark (1972:605) cited the type of this taxon as “prope Paramaribo, Mar–Apr 1844, Kappler 1562” without indicating the herbarium where it is deposited, which is a first-step lectotypification. At U, where Miquel worked, is a specimen of *Kappler 1562*, barcode U0006198, which is here designated as the second-step lectotype.

Müller Argoviensis (1881:330) described *Psychotria barbiflora* var. *amazonica* Müll. Arg. and cited the following syntypes from Brazil: Pará, near Santarem, *Spruce 506, 630, 673; Wallis s.n.*; near Obidos, *Spruce 531* (G! [G00300781]); Rio Negro, Airao, *Spruce 1893* (G!); San Carlos, *Riedel s.n.* (G!). Steyermark (1972:606) cited the type of this variety as “Santarem, May 1850, *Spruce 630*” without indicating the herbarium, which is a first-step lectotypification. The first choice for selection of a lectotype of this variety is a G specimen, where Müller Argoviensis worked. However, Spruce’s specimens of this variety at G do not have a collection number. At K is a sheet with two collections of *Spruce 630*, one with flowers, collected in January 1850, and the other with fruits, collected in May 1850, which is the collection date reported by Steyermark. Therefore, the fruiting specimen, with barcode K000174364, is here designated as the second-step lectotype of this taxon.

Steyermark (1972:607–608) cited the type of *Psychotria erythrophylla* Müll. Arg. as “In Vasiva ripis (in regione Rio Negro ad flumina Casiquiari, Vasiva et Pacimoni), Amazonas, Venezuela, Jan 1854, *Spruce 3439*” and on the following page he wrote that “[...] the length of the peduncle of *P. erythrophylla* as 2–2.5 cm. An examination of the type specimen from K shows glabrous peduncles [...]” These statements constitute a lectotypification. In addition, he treated this taxon as a variety of *Psychotria hoffmannseggiana*; however, because of the long-pedunculate, cymose inflorescence we prefer to treat it as a synonym of *Palicourea tenerior*.

Steyermark (1972:614–616) recognized two subspecies in *Psychotria officinalis*, using as diagnostic characters the leaf vestiture and bract length; however, recent collections demonstrated that the ranges of these characters overlap, and no subspecific taxa are here recognized in this species.

72. *Palicourea tepuiensis* (Steyer.) C.M. Taylor, *Novon* 24:77. 2015. *Cephaelis tepuiensis* Steyer., *Mem. New York Bot. Gard.* 17(1):430. 1967. *Psychotria tepuiensis* (Steyer.) Steyer., *Mem. New York Bot. Gard.* 23:661. 1972. TYPE: VENEZUELA.

BOLIVAR: Alto Río Cuyuni, Río Uiriyuk, summit of La Escalera, 1000 m, 20–21 Aug 1962, B. Maguire et al. 46864 (HOLOTYPE: VEN [No. 63024]; ISOTYPES: F [No. 1783611], NY n.v., U [U0006250], US [00129837]).

Distribution.—Guyana Highlands of southern Venezuela and Guyana.

73. *Palicourea tetramera* (Steयरम.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria tetramera* Steयरम., Mem. New York Bot. Gard. Gard. 23:654. 1972. TYPE: GUYANA: Chinoweg, 5 Jul 1957, *Forest Dept.* 7832 (*Collector Unknown, Field No. RB 8*) (HOLOTYPE: NY [00132843]).

Distribution.—Only known from Guyana.

74. *Palicourea tomentosa* (Aubl.) Borhidi, Acta Bot. Hung. 53:248. 2011 [2012]. *Tapogomea tomentosa* Aubl., Hist. Pl. Guiane 1:160, t. 61. 1775, non *Psychotria tomentosa* (Oerst.) Hemsl. (Apr 1881). *Callicocca tomentosa* (Aubl.) J.F. Gmel., Syst. Nat. 1:371. 1791. *Cephaelis tomentosa* (Aubl.) Vahl, Eclog. Amer. 1:19. 1796. *Psychotria tomentosa* (Aubl.) Müll. Arg. in Martius, Fl. Bras. 6(5): 370. Jul 1881, nom. illeg. *Uragoga tomentosa* (Aubl.) K. Schum. in Engl. & Prantl, Nat. Pflanzenfam. 4(4):120. 1891. TYPE: FRENCH GUIANA: without locality, s.d. [1762–1764], J.B.C.F. Aublet s.n. (LECTOTYPE (Lanjouw & Uittien 1940:159):P-JJR 8: 265D (lower portion of the sheet); ISOLECTOTYPE: BM [BM001008942]).

Cephaelis hirsuta M. Martens & Galeotti, Bull. Acad. Roy. Sci. Bruxelles 11(1):135. 1844, non *Psychotria hirsuta* Sw. (1797). TYPE: MEXICO: Oaxaca: without locality, s.d., G.H. Galeotti 7185 (LECTOTYPE, here designated: BR [000005316045]; ISOLECTOTYPES: BR [2 sheets, 000005315710, 000005315833]).

Psychotria poeppigiana Müll. Arg. in Martius, Fl. Bras. 6(5):370, t. 57, f. 1. 1881. *Uragoga poeppigiana* (Müll. Arg.) Kuntze, Revis. Gen. Pl. 2:962. 1891. TYPE: BRAZIL: AMAZONAS: “prope Ega” [now Tefé], 1834, E.F. Poeppig 3065 (first-step LECTOTYPE (Steयरम. 1972:680), **second-step LECTOTYPE, here designated:** G [G00418072]; ISOLECTOTYPES: W [Accession No. W104833], frag F [No. 766938]; possible ISOLECTOTYPES: G [G00418071], W [2 sheets, No. W0053537 and No. W111261]).

Psychotria barcellana Müll. Arg. in Martius, Fl. Bras. 6(5):369. 1881. *Cephaelis barcellana* (Müll. Arg.) Standl., Publ. Field Columbian Mus., Bot. Ser. 8:184. 1930. *Psychotria poeppigiana* subsp. *barcellana* (Müll. Arg.) Steयरम., Mem. New York Bot. Gard. 23:680. 1972. TYPE: BRAZIL: AMAZONAS: Rio Negro, Arião, Nov 1851, R. Spruce 1852 (or 1892), pro parte (first-step LECTOTYPE (Steयरम. 1972:680), **second-step LECTOTYPE, here designated:** K [K000174426]).

Distribution.—Mexico, Central America, Colombia, Venezuela, Guianas, Ecuador, Peru, Bolivia, and throughout Brazil.

Notes.—Müller Argoviensis (1881:370) described *Psychotria poeppigiana* Müll. Arg. and cited several syntypes from Amazonian Brazil. Steयरम. (1972:678) cited the type of Müller’s taxon as “French Guiana, Aublet,” and two pages later (1972:680), among the specimens studied, he cited the type as “prope Ega, Poeppig 3056” without indicating the herbarium of deposit. His first typification is wrong because Müller (1881:370) did not include Aublet’s collection from French Guiana in his *Psy. poeppigiana*, but in his *Psy. tomentosa* (Müller, 1881:370–371). Steयरम.’s typification on page 680 is a first-step lectotypification. In G are two sheets of *Poeppig 3065*; the first, barcode G00418072, has the annotation “3065, Bresil, M. Poeppig 1834, P. poeppigiana Müll. Arg. – scripsit Müll. Arg.!” Because G00418072 has the annotation handwritten by Müller Argoviensis, it is here designated as a second-step lectotype, although the collection locality is not indicated on the specimen. The second specimen at G, barcode G00418071, has no species identification, and has the typewritten locality “Chili, Pérou et fleuve de La Plata, No. 3065”; because the collection locality reported on the specimen label does not correspond to the type locality, it is here treated as a possible isolectotype. In W there are three specimens of *P. poeppigiana* collected by Poeppig in Ega [now Tefé]; one of them, accession No. W104833, has the collection number “3065” and is an isolectotype, while two others, accession Nos. W0053537 and W111261, are without a collection number and are possible isolectotypes. At F there is a sheet of *Poeppig 3065*, with a single leaf [ex G], which is an isolectotype fragment.

Along with the description of *Psychotria barcellana* Müll. Arg., Müller Argoviensis (1881:369) cited the following syntypes from Amazonian Brazil: Rio Negro, between Manaus and Barcellos, *Spruce 1852* (or 1892) [*“Spruce n. 1852 (aut 1892)”*]; prope Esmeralda, *Spruce s.n.*; and, Rio Uaupes, *Spruce 2929*. Steयरम. (1972:680) lectotypified *Psy. poeppigiana* subsp. *barcellana* on *Spruce 1852* (1892), which is a first-step lectotypification, and a second-step lectotype is designated here on K000174426. The label on the K specimen has “Rio Negro – Airão, shady forest, Nov 51, [Spruce] 1892” written on the upper portion, and “alto Unanuca, see fragment,

Spruce 1852" written on the lower portion. Therefore, it matches Müller's and Steyermark's citation. There is a P specimen of *Spruce 1892*, but it was determined as *Psy. poeppigiana* Müll. Arg. by Müller Argoviensis.

As already pointed out by Taylor and Steyermark (2004:753–754), the two subspecies recognized by Steyermark (1972:678–684) in *Psychotria poeppigiana* are widely sympatric. After accurate comparison throughout the distribution of the species, no additional characters can be found to distinguish them, and they were treated as synonymous by Delprete (2010:934–937).

75. *Palicourea tricholoba* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria tricholoba* Müll. Arg. in Martius, Fl. Bras. 6(5): 343. 1881. *Petagomoa tricholoba* (Müll. Arg.) Bremek., Recueil Trav. Bot. Néerl. 31:295. 1934. TYPE: BRAZIL, BAHIA: "In sylvis primaevae ad Almada," s.d., *Leo du Pasquier* s.n. (LECTOTYPE, **here designated**: G [G00300453]).

Distribution.—Guyana, Suriname, and Brazil.

76. *Palicourea trichophora* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria trichophora* Müll. Arg., Flora 59:541, 545. 1876. TYPE: BRAZIL, GOIÁS: Rio Maranhão, s.d. [1818–1819], *J.B.E. Pohl 2053* (LECTOTYPE, **here designated**: G [G00300454]).

Psychotria trichophoroides Müll. Arg., Flora 59:541, 545. 1876 (cited as syn. of *P. trichophora* in Taylor 2007). *Cephaelis trichophoroides* (Müll. Arg.) Standl., Publ. Field Columbian Mus., Bot. Ser. 8:183. 1930. *Petagomoa trichophoroides* (Müll. Arg.) Bremek., Recueil Trav. Bot. Néerl. 31:295. 1934. TYPE: BRAZIL, Rio de Janeiro ["Goiás" sic!], Serra Tingua, s.d., *J.B.E. Pohl 5306* (first-step LECTOTYPE (Steyermark 1972:642), **second-step LECTOTYPE, here designated**: G [G00300455]; ISOLECTOTYPE: NY [00133508]; possible ISOLECTOTYPE: BR [00000531499, without collection number]).

Psychotria sciaphila S. Moore, Trans. Linn. Soc. London, ser. 2, 4:379. 1896. TYPE: BRAZIL, MATO GROSSO: "in sylvis juxta ripas fl. Paraguay inter Santa Cruz et Diamantino," s.d. [1891–1892], *S.M. Moore 643* (first-step LECTOTYPE (Steyermark 1972:641); **second-step LECTOTYPE, here designated**: BM [BM000611028]; ISOLECTOTYPES: K [K000174411], NY [00132815]; photo-BM at NY).

Petagomoa nigricans Bremek., Recueil Trav. Bot. Néerl. 31:295. 1934. TYPE: SURINAME: Forest Reserve Brownsberg, 6 Sep 1915, *G. Stahel & J.W. Gonggrijp 123* (B.W. 632) (LECTOTYPE, **here designated**: U [U0006253]).

Psychotria sciaphila subsp. *longicalyx* Steyer., Mem. New York Bot. Gard. 23:641. 1972. TYPE: BRAZIL, DISTRITO FEDERAL: Parque Municipal do Gama, 25 km S of Brasília, 1150 m, 10 Nov 1965, *H.S. Irwin et al. 10161* (HOLOTYPE: NY [00132816]; ISOTYPES: F [No. 1726870], NY [01005486], US [00479212]).

Distribution.—Venezuela, Guianas, Bolivia, and throughout Brazil.

Notes.—Müller Argoviensis (1876:541, 545) described *Psychotria trichophora* Müll. Arg. and cited the collection *Pohl 2053*. Steyermark (1972:643) erroneously reported the type of this taxon as "Almado [sic!], Bahia, Martius (*Leo du Pasquier* [sic!])" probably confusing it with one of the syntypes of *Psychotria tricholoba* Müll. Arg. (see above).

For more detail about the taxa here placed in synonymy and the delimitation of this species, see Delprete (2010:961–963).

77. *Palicourea urceolata* (Steyer.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria urceolata* Steyer., Brittonia 33:395. 1981. TYPE: FRENCH GUIANA: Mount Galbao, NE range, 10 km SW of Saül, 500–600 m, 11 Mar 1975, *J.J. de Granville 2393* (HOLOTYPE: VEN [No. 134316]; ISOTYPES: CAY [2 sheets, CAY024946, CAY024947], K [K000432824], NY [00334998], P [P02428041], U [U0006254]).

Distribution.—Amazonian Colombia and Brazil, and French Guiana.

78. *Palicourea venulosa* (Müll. Arg.) Delprete & J.H. Kirkbr., **comb. nov.** *Psychotria venulosa* Müll. Arg. in Martius, Fl. Bras. 6(5):294. 1881. *Psychotria deflexa* subsp. *venulosa* (Müll. Arg.) Steyer., Mem. New York Bot. Gard. 23:503. 1972. TYPE: BRAZIL, AMAZONAS: São Gabriel da Cachoeira, Rio Negro, Jan–Aug 1852, *R. Spruce 2067* (first-step LECTOTYPE (Steyermark 1972:503), **second-step LECTOTYPE, here designated**: NY [00132859]; ISOLECTOTYPES: G [G00300466], P [P02428031]).

Distribution.—Colombia, Venezuela, Guyana Peru, and Brazil.

Notes.—The sole collection cited by Müller Argoviensis (1881:295) with the description of *Psy. venulosa* is *Spruce 2067*. The first choice for the selection of a lectotype should be a specimen at G; however, the specimen at G is fragmentary consisting of a single leaf and a young inflorescence. The NY specimen is a complete flowering branch, and is here designated as the lectotype. The label of the P specimen has the collection date of January 1851, while that at NY is January–August 1852, and that at G does not have a collection date.

Steyermark (1972:501–505) recognized five subspecies in *Psychotria deflexa* DC., some based on species previously described by Müller Argoviensis, which were all treated as separate species by Taylor and Steyermark (2004:735–736, 763–764). They stated that “*Psychotria venulosa* differs from the other species [of the *P. deflexa* complex] in its stipules with the sheath elongating with age, so that on older nodes the lobes are inserted below its top (as in *P. lupulina*), and its leaves with the secondary veins usually subparallel and raised on the upper leaf surface.” (Taylor & Steyermark 2004:736).

- 79. *Palicourea violacea*** (Aubl.) A. Rich., Mém. Fam. Rubiac. 95. 1830. *Nonatelia violacea* Aubl., Hist. Pl. Guiane 1:188, t. 73. 1775. *Oribasia violacea* (Aubl.) J.F. Gmel., Syst. Nat. 367. 1791. *Psychotria amplifolia* Raeusch., Nomencl. Bot., ed. 3, 56. 1797 (based on *Oribasia violacea* (Aubl.) Gmel.). *Psychotria violacea* (Aubl.) Willd., Sp. Pl. 966. 1798, nom. illeg., non *Psychotria violacea* Aubl. (1775) [= *Geophila repens* (L.) I.M. Johnston]. *Naletonia violacea* (Aubl.) Bremek., Recueil Trav. Bot. Néerl. 31:285. 1934. *Psychotria capitata* subsp. *amplifolia* (Raeusch.) Steyermark, Mem. New York Bot. Gard. 23:619. 1972. TYPE: FRENCH GUIANA: Comté de Gennes, “in sylvis comitatús de Gène,” s.d. [1762–1764], J.B.C.F. Aublet s.n. (LECTOTYPE (Lanjouw & Uittien 1940:154): P-JJR 8: 271D; ISOLECTOTYPE: BM [without barcode when examined]).
- Psychotria capitata* Ruiz & Pav., Fl. Peruv. 2:59, tab. 206, fig. a. 1799. *Palicourea capitata* (Ruiz & Pav.) Borhidi, Acta Bot. Hung. 53:243. 2011 [2012]. TYPE: PERU. Huánuco: Chinchao, “in Andium montibus nemorosis per Chinchao runcationes,” s.d., H. Ruiz Lopez & J.A. Pavón s.n. (LECTOTYPE, here designated: MA [MA815948]). EPITYPE, here designated: PERU: Dept. Junin, Schunke Hacienda, above San Ramón, 1300–1700 m, dense forest, Aug–Sep 1923, C. Schunke A19 (US [No. 1470372]).
- Psychotria setifera* Benth., J. Bot. (Hooker) 3:228. 1841. TYPE: GUYANA: without locality, s.d. [1836], *Rob. Schomburgk* s.n. [originally mixed with *Rob. Schomburgk*, ser. I, 95, *Spanea dichotoma* Kunth] (HOLOTYPE: K [K000174336]).
- Psychotria arcuata* Benth., J. Bot. (Hooker) 3:229. 1841. TYPE: GUYANA: Berbice River, s.d. [1837], *Rob. Schomburgk*, ser. I, 415 (LECTOTYPE, here designated: GH [00095136]; ISOLECTOTYPES: K n.v., L [L0057945], TCD [TCD0005795], US [00138656]).
- Psychotria inundata* Benth., J. Bot. (Hooker) 3:229. 1841; *Psychotria inundata* Benth. ex Pulle, Enum. Pl. Sur. 443. 1906, nom. superfl., non *Psychotria inundata* K. Krause (1908), nom. illeg. *Psychotria capitata* subsp. *inundata* (Benth.) Steyermark, Mem. New York Bot. Gard. 23:618. 1972. TYPE: GUYANA: on the banks of the Essequibo River, where they are liable to inundation, s.d. [1841], *Rob. Schomburgk*, ser. I, 27 (first-step LECTOTYPE (Steyermark 1972:618), second-step LECTOTYPE, here designated: E [E00086583]; ISOTYPES: G [G00300933, 2 sheets], K n.v.).
- Declieuxia roraimensis* Wernham, J. Bot. 52:226. 1914. *Psychotria capitata* var. *roraimensis* (Wernham) Steyermark, Mem. New York Bot. Gard. 23:619. 1972. TYPE: VENEZUELA: Roraima: without locality, s.d. [1842–1843], *Rob. Schomburgk* ser. II, 581 (= *Rich. Schomburgk* 892) (HOLOTYPE: BM [BM000839261]; ISOTYPE: P [P00836996]).
- Psychotria cubitalis* Standl. & Steyermark, Fieldiana, Bot. 28:598. 1953. TYPE: VENEZUELA: BOLIVAR: between Santa Teresita de Cavanayén and Pacairao River (tributary of Mouak River), 1065–1220 m, 20–21 Nov 1944, J.A. Steyermark 60380 (HOLOTYPE: F [No. 1182112]; ISOTYPES: A [00095155], NY [00132653], US [00138720], VEN [No. 38311]).
- Psychotria heterocarpa* Standl. & Steyermark, Fieldiana, Bot. 28:600. 1953. TYPE: VENEZUELA. BOLIVAR: Sororopán-tepui, between quebrada and Salto de Iwaracaré-merú, 1615–1980 m, 15 Nov 1944, J.A. Steyermark 60191 (HOLOTYPE: F [No. 1181998]; ISOTYPES: F [No. 1181999], NY [00132688], VEN [No. 15790]).
- Psychotria capitata* f. *trichophora* Steyermark, Mem. New York Bot. Gard. 23:617. 1972. TYPE: COLOMBIA. META: Sierra Macarena, Rio Zanza, 500 m, 12 Mar 1956, S. Vogel 290 (HOLOTYPE: M n.v.).
- Psychotria capitata* var. *septentrionalis* Steyermark, Mem. New York Bot. Gard. 23:621. 1972. TYPE: TRINIDAD: vicinity of Valencia, 4 Mar 1921, N.L. Britton & E.G. Britton 2104 (HOLOTYPE: NY n.v.)

Distribution.—Central America, Colombia, Trinidad, Venezuela, Guianas, Ecuador, Peru, and Brazil.

Notes.—This species in classic literature is commonly known as *Psychotria capitata* Ruiz & Pav., and is widespread throughout the Neotropics; however, it has never been properly typified. At MA are preserved two specimens and a drawing, which are original material for this name: Specimens MA815947 and MA815948 collected by Ruiz and Pavón, and the drawing MA-AJB04-D-0419 made by Isidro Galvez, which was made from these specimens. MA815948 is here selected as the lectotype of *P. capitata* as is an original collection of the authors; however, the inflorescences are still young and congested, and therefore this specimen does not have the characteristic expanded inflorescences of this species. For this reason, we select *Schunke A19* (US barcode 01246623) as the epitype of this name, because it has the characteristic large, bilobed stipules, expanded inflorescence, numerous corollas, several of which are in anthesis (thrum flowers), and was collected at 1300–1700 m altitude, on the Amazonian side of the Andes of Peru.

Bentham (1841:229) cited *Rob. Schomburgk*, ser. I, 27, and Steyermark (1972:618–619) stated that it was the type of *Psychotria inundata* Benth. Neither one indicated the herbaria where the specimens were deposited. The specimen at E, barcode E00086583, is here designated as the lectotype of this taxon.

Steyermark (1972:616–624) attempted to organize this highly variable species into three subspecies and two varieties, but admitted that “the variations are distinctive in their extremes, but so many intergrading series are present that they have been interpreted here as one taxon with several subspecies and varieties.” A careful analysis of more than 300 collections across the distribution range, including numerous recent collections, showed that it is difficult to subdivide this species into natural entities correlated with geographic patterns. Therefore, no subspecific ranks are recognized in this species, which is morphologically highly variable, adaptable to various habitats, and with a wide altitudinal range.

80. *Palicourea viridibractea* (Steyerm.) Delprete & J.H. Kirkbr, **comb. nov.** *Psychotria viridibractea* Steyerm., Brittonia 36:158, f. 4. 1984. TYPE: FRENCH GUIANA: Saül, summit of Mount Ga bao, 670 m, 1 Mar 1977, J.J. de Granville 2793 (HOLOTYPE: VEN [No. 195092]; ISOTYPES: B n.v., BR [00000532596], L n.v., NY n.v., K n.v., CAY [transferred to P], P [06800582]).

Distribution.—Only known from French Guiana.

APPENDIX 1

Index to names cited in the text. Numbers between parentheses correspond to the numbers given to accepted names. Accepted names are highlighted in **bold**.

- Callicocca alba* (Aubl.) Gmel. (4)
Callicocca purpurea (Aubl.) Gmel. (25)
Callicocca tomentosa (Aubl.) Gmel. (74)
Carapichea patrisii DC. (40)
Cephaelis aetantha Sandwith (3)
Cephaelis alba (Aubl.) Willd. (4)
Cephaelis amoena Bremek. (20)
Cephaelis attenuata Miq. (66)
Cephaelis axillaris Sw. (9, 66)
Cephaelis barcellana (Müll. Arg.) Standl. (74)
Cephaelis blepharophylla Standl. (34)
Cephaelis bracteocardia DC. (14)
Cephaelis cacuminis Steyerm. (9)
Cephaelis callithrix Miq. (15)
Cephaelis colorata Willd. ex Roem. & Schult. (20)
Cephaelis cymosa Spreng. (46)
Cephaelis dichotoma Rudge (27)
Cephaelis dichotoma Willd. ex Roem. & Schult. (27, 40)
Cephaelis duckei Standl. (2)
Cephaelis ernestii K. Krause (30)
Cephaelis fanshawei Standl. (32)
Cephaelis glabrescens (Müll. Arg.) Standl. (20)
Cephaelis hemicephaelis (Wernham) Steyerm. (38)
Cephaelis hirsuta M. Martens & Galeotti (74)
Cephaelis hirta Miq. (39)
Cephaelis hoffmannseggiana Willd. ex Roem. & Schult. (40)
Cephaelis humboldtiana Cham. (41)
Cephaelis involucreta Willd. (71)
Cephaelis jenmanii Wernham (45)
Cephaelis justiciifolia Rudge (46)
Cephaelis kaieteurensis Wernham (47, 64)
Cephaelis kennedyae Dwyer (51)
Cephaelis medusula (Müll. Arg.) Steyerm. (34)
Cephaelis microcephala Miq. (71)
Cephaelis muscosa (Jacq.) Sw. (51)
Cephaelis oblonga DC. (53)
Cephaelis paraensis Standl. (4)
Cephaelis patrisii (DC) D. Dietr. (40)
Cephaelis potaroensis Sandwith (58)
Cephaelis pubescens Hoffmans. ex Willd. in Roem. & Schult. (14)
Cephaelis purpurea (Aubl.) Willd. (25)
Cephaelis rosea Benth. (20)
Cephaelis rubra Hoffmanns. ex Roem. & Schult. (40)
Cephaelis surinamensis Standl. (25)
Cephaelis sylvatica Bremek. (14)
Cephaelis tatei Standl. (23, 70)
Cephaelis tepuiensis Steyerm. (72)
Cephaelis tomentosa (Aubl.) Vahl (74)
Cephaelis tontaneoides (Britton & Standl.) R.O. Williams & Cheesman (15)
Cephaelis tontaneoides (Britton & Standl.) Standl. (15)
Cephaelis trichophoroides (Müll. Arg.) Standl. (76)
Cephaelis violacea (Aubl.) Sw. (7)
Cephaelis violacea Aubl. (7)
Cephaelis violacea Willd. (7)
Coffea sessilis Vell. (66)
Declieuxia roraimensis Wernham (79)
Evea tontaneoides Britton & Standl. (15)
Gamotopea alba (Aubl.) Bremek. (4)
Gamotopea callithrix (Miq.) Bremek. (15)
Gamotopea oblonga (DC.) Lemée (53)
Gamotopea purpurea (Aubl.) Bremek. (25)
Gamotopea surinamensis (Standl.) Bremek. (25)
Geophila paraensis J. Huber ex Standl. (4)
Geophila picta Rolfe (4)
Geophila repens (L.) I.M. Johnst. (79)
Mapouria coussareoides Müll. Arg. (22)
Morinda muscosa Jacq. (51)
Naletonia violacea (Aubl.) Bremek. (79)
Nonatelia officinalis Aubl. (71)
Nonatelia paniculata Aubl. (8)
Nonatelia pubescens Spreng. (11)
Nonatelia racemosa Aubl. (63)
Nonatelia violacea Aubl. (7, 79)
Oribasia officinalis (Aubl.) Gmel. (71)
Oribasia paniculata (Aubl.) Gmel. (8)
Oribasia racemosa (Aubl.) Gmel. (63)
Oribasia violacea (Aubl.) Gmel. (79)
Palicourea acuminata (Benth.) Borhidi (1)
Palicourea adolfoduckei Delprete & J.H. Kirkbr. (2)
Palicourea aetantha (Sandwith) Delprete & J.H. Kirkbr. (3)
Palicourea alba (Aubl.) Delprete & J.H. Kirkbr. (4)
Palicourea alloantha (Steyerm.) Delprete & J.H. Kirkbr. (5)
Palicourea amplexens (Benth.) Delprete & J.H. Kirkbr. (6)
Palicourea apoda (Steyerm.) Delprete & J.H. Kirkbr. (7)
Palicourea aubletii Delprete & J.H. Kirkbr. (8)
Palicourea axillaris (Sw.) Borhidi (9)
Palicourea ayangannensis (Steyerm.) Delprete & J.H. Kirkbr. (10)

- Palicourea berteriana*** (DC.) Borhidi (11)
Palicourea bostrychothyrus (Sandwith) Delprete & J.H. Kirkbr. (12)
Palicourea boyanii (Steyerm.) C.M. Taylor (13)
Palicourea bracteocardi (DC.) Delprete & J.H. Kirkbr. (14)
Palicourea callithrix (Miq.) Delprete & J.H. Kirkbr. (15)
Palicourea campyloneura (Müll. Arg.) Delprete & J.H. Kirkbr. (16)
Palicourea campylopoda (Standl.) Delprete & J.H. Kirkbr. (17)
Palicourea capitata (Ruiz & Pav.) Borhidi (79)
Palicourea cardiomorpha (C.M. Taylor & A. Pool) Delprete & J.H. Kirkbr. (18)
Palicourea ceratantha (Standl.) C.M. Taylor (19)
Palicourea colorata (Willd. ex Roem. & Schult.) Delprete & J.H. Kirkbr. (20)
Palicourea concinna (Oliv.) Delprete & J.H. Kirkbr. (21)
Palicourea cornigera C.M. Taylor (28)
Palicourea coussareoides (Standl.) Delprete & J.H. Kirkbr. (22)
Palicourea crococlhamys (Sandwith) Delprete & J.H. Kirkbr. (23)
Palicourea cypellantha (Steyerm.) Delprete & J.H. Kirkbr. (24)
Palicourea debilis (Müll. Arg.) Delprete & J.H. Kirkbr. (25)
Palicourea deflexa (DC.) Borhidi (26)
Palicourea dichotoma (Rudge) Delprete & J.H. Kirkbr. (27)
Palicourea didymocarpus (A. Rich. ex DC.) Griseb. (28)
Palicourea duckei Standl. (2)
Palicourea duricoria (Standl. & Steyerm.) Delprete & J.H. Kirkbr. (29)
Palicourea ernestii (K. Krause) C.M. Taylor (30)
Palicourea everardii (Wernham.) Delprete & J.H. Kirkbr. (31)
Palicourea fanshawei (Standl.) Delprete & J.H. Kirkbr. (32)
Palicourea faramoides (Bremek.) Delprete & J.H. Kirkbr. (33)
Palicourea glabra (Aubl.) Delprete & J.H. Kirkbr. (34)
Palicourea glandulicalyx (Steyerm.) Delprete & J.H. Kirkbr. (35)
Palicourea gracilentia (Müll. Arg.) Delprete & J.H. Kirkbr. (36)
Palicourea granvillei (Steyerm.) Delprete & J.H. Kirkbr. (37)
Palicourea hemicephalis (Wernham) Delprete & J.H. Kirkbr. (38)
Palicourea hirta (Miq.) Delprete & J.H. Kirkbr. (39)
Palicourea hoffmannseggiana (Willd. ex Roem. & Schult.) Borhidi (40)
Palicourea humboldtiana (Cham.) Delprete & J.H. Kirkbr. (41)
Palicourea hypoides (Benth.) Delprete & J.H. Kirkbr. (42)
Palicourea imthurniana (Oliv.) Delprete & J.H. Kirkbr. (43)
Palicourea iodotricha (Müll. Arg.) Delprete & J.H. Kirkbr. (44)
Palicourea jenmanii (Wernham) C.M. Taylor (45)
Palicourea justicifolia (Rudge) Delprete & J.H. Kirkbr. (46)
Palicourea kaieteurensis (Wernham) C.M. Taylor (47, 64)
Palicourea longicuspis (Müll. Arg.) Delprete & J.H. Kirkbr. (48)
Palicourea maguireorum (Steyerm.) Delprete & J.H. Kirkbr. (49)
Palicourea microbotrys (Ruiz ex Standl.) Delprete & J.H. Kirkbr. (50)
Palicourea muscosa (Jacq.) Delprete & J.H. Kirkbr. (51)
Palicourea oblita (Wernham) Delprete & J.H. Kirkbr. (52)
Palicourea oblonga (DC.) Delprete & J.H. Kirkbr. (53)
Palicourea officinalis Mart. (71)
Palicourea pakaraimensis (Steyerm.) Delprete & J.H. Kirkbr. (54)
Palicourea paniculata (L.f.) Moraes & C.M. Taylor (8)
Palicourea phaneroloma (Standl. & Steyerm.) Delprete & J.H. Kirkbr. (55)
Palicourea plocamipes (Wernham.) Delprete & J.H. Kirkbr. (56)
Palicourea polycephala (Benth.) Delprete & J.H. Kirkbr. (57)
Palicourea potaroensis (Sandwith) Delprete & J.H. Kirkbr. (58)
Palicourea prancei (Steyerm.) Delprete & J.H. Kirkbr. (59)
Palicourea pseudinundata (Wernham) Delprete & J.H. Kirkbr. (60)
Palicourea psittacina (Steyerm.) Delprete & J.H. Kirkbr. (61)
Palicourea pubescens (Sw.) Borhidi (11, 14)
Palicourea pullei (Bremek.) Delprete & J.H. Kirkbr. (62)
Palicourea purpurea C.M. Taylor (25)
Palicourea racemosa (Aubl.) Borhidi (63)
Palicourea roraimae Standl. (52)
Palicourea sandwithii Delprete & J.H. Kirkbr. (64)
Palicourea schomburgkii (Benth.) Delprete & J.H. Kirkbr. (65)
Palicourea sessilis (Vell.) C.M. Taylor (66)
Palicourea sessilis (Vell.) C.M. Taylor subsp. *sororopanensis* (Standl. & Steyerm.) C.M. Taylor (66)
Palicourea speluncae (Standl. & Steyerm.) C.M. Taylor (67)
Palicourea subundulata (Benth.) Delprete & J.H. Kirkbr. (68)
Palicourea swartziana Borhidi (71)
Palicourea tapirapeoana (Steyerm.) Delprete & J.H. Kirkbr. (69)
Palicourea tatei (Standl.) Delprete & J.H. Kirkbr. (23, 70)
Palicourea tenerior (Cham.) Delprete & J.H. Kirkbr. (71)
Palicourea tepuiensis (Steyerm.) C.M. Taylor (72)
Palicourea tetramera (Steyerm.) Delprete & J.H. Kirkbr. (73)
Palicourea tomentosa (Aubl.) Borhidi (74)
Palicourea tricholoba (Müll. Arg.) Delprete & J.H. Kirkbr. (75)
Palicourea trichophora (Müll. Arg.) Delprete & J.H. Kirkbr. (76)
Palicourea urceolata (Steyerm.) Delprete & J.H. Kirkbr. (77)
Palicourea venulosa (Müll. Arg.) Delprete & J.H. Kirkbr. (78)
Palicourea violacea (Aubl.) A. Rich. (7, 79)
Palicourea viridibracteata (Steyerm.) Delprete & J.H. Kirkbr. (80)
Patabea alba Kunth (46)
Patabea tenerior Cham. (71)
Petagomoa atricapilla Bremek. (44)
Petagomoa hirta (Miq.) Bremek. (39)
Petagomoa iodotricha (Müll. Arg.) Bremek. (44)
Petagomoa nigricans Bremek. (76)
Petagomoa tricholoba (Müll. Arg.) Bremek. (75)
Petagomoa trichophoroides (Müll. Arg.) Bremek. (76)
Psychotria acuminata Benth. (1)
Psychotria aetantha (Sandwith) Steyerm. (3)
Psychotria alba Ruiz & Pav. (4, 46)
Psychotria alloantha Steyerm. (5)
Psychotria amplexens Benth. (6)
Psychotria amplifolia Raesch. (79)
Psychotria apoda Steyerm. (7)
Psychotria appuniana Steyerm. (47)
Psychotria arcuata Benth. (79)
Psychotria arenaria Standl. & Steyerm. (19)
Psychotria atabapoensis Standl. (68)
Psychotria aubletiana Steyerm. (9, 31)
Psychotria aubletiana Steyerm. var. *andina* Steyerm. (9)
Psychotria aubletiana Steyerm. var. *pubescens* Steyerm. (9)
Psychotria aubletiana Steyerm. var. *cacuminis* (Steyerm.) Steyerm. (9)
Psychotria aubletiana Steyerm. var. *cacuminis* f. *tomentella* Steyerm. (9)
Psychotria aubletiana Steyerm. var. *centro-americana* Steyerm. (9)
Psychotria aubletiana Steyerm. var. *producta* Steyerm. (9)
Psychotria auyantepuiensis Standl. ex Gleason & Killip (43)
Psychotria axillaris Vell. (9, 66)
Psychotria axillaris Willd. (9, 66)
Psychotria ayangannensis Steyerm. (10)
Psychotria bahiensis DC. (40)
Psychotria bahiensis DC. var. *cornigera* (Benth.) Steyerm. (28)
Psychotria bahiensis Müll. Arg. (40)
Psychotria barbiflora DC. (40)
Psychotria barbiflora DC. var. *amazonica* Müll. Arg. (71)
Psychotria barcellana Müll. Arg. (74)
Psychotria berteriana DC. (11)
Psychotria berteriana DC. subsp. *venezuelica* Steyerm. (11)
Psychotria blepharophylla (Standl.) Steyerm. (34)

- Psychotria bostrychothyrsus* Sandwith (12)
Psychotria boyanii Steyerem. (13)
Psychotria brachybotrya Müll. Arg. (36)
Psychotria bracteata D. Dietr. (60)
Psychotria bracteata DC. (60)
Psychotria bracteata DC. var. *genuina* Müll. (60)
Psychotria bracteata DC. var. *intermedia* Müll. Arg. (49)
Psychotria bracteata DC. var. *latifolia* Müll. Arg. (49)
Psychotria bracteata DC. var. *tenuifolia* Müll. Arg. (49)
Psychotria bracteata F. Dietr. (60)
Psychotria bracteata Wight & Arn. (60)
Psychotria bracteocardia (DC.) Müll. Arg. (14)
Psychotria bremekampiana Steyerem. (39)
Psychotria brevipes DC. (27)
Psychotria breweri Steyerem. (70)
Psychotria cacuminis Standl. (9, 31)
Psychotria cacuminis Steyerem. (9, 31)
Psychotria callithrix (Miq.) Steyerem. (15)
Psychotria callithrix (Miq.) Steyerem. var. *tontaneoides* (Britton & Standl.) Steyerem. (15)
Psychotria caloneura Müll. Arg. (66)
Psychotria calviflora Steyerem.,
Psychotria campyloneura Müll. Arg. (16)
Psychotria campylopoda Standl. (17)
Psychotria capitata Ruiz & Pav. (79)
Psychotria capitata Ruiz & Pav. subsp. *capitata* var. *capitata* f. *trichophora* Steyerem. (79)
Psychotria capitata Ruiz & Pav. subsp. *inundata* (Benth.) Steyerem. (79)
Psychotria capitata Ruiz & Pav. subsp. *inundata* var. *roraimensis* (Wernham) Steyerem. (79)
Psychotria capitata Ruiz & Pav. subsp. *inundata* var. *septentrionalis* Steyerem. (79)
Psychotria capitata Ruiz & Pav. subsp. *amplifolia* (Raeusch.) Steyerem. (79)
Psychotria cardiomorpha C.M. Taylor & A. Pool (18)
Psychotria cardiomorpha C.M. Taylor & A. Pool subsp. *perpusilla* C.M. Taylor & A. Pool (18)
Psychotria ceratantha Standl. (19)
Psychotria chondroloma Standl. (65)
Psychotria cincta Standl. (48)
Psychotria colorata (Willd. ex Roem. & Schult.) Müll. Arg. (20)
Psychotria colorata (Willd. ex Roem. & Schult.) Müll. Arg. subsp. *megapontica* (Müll. Arg.) Steyerem. (20)
Psychotria concinna Oliv. (21)
Psychotria contracta Müll. Arg. (46)
Psychotria cordifolia F. Dietr. (18)
Psychotria cordifolia Kunth (18)
Psychotria cordifolia Kunth subsp. *perpusilla* Steyerem. (18)
Psychotria cornigera Benth. (28)
Psychotria coussareoides Standl. (22)
Psychotria coussareoides Standl. var. *ciliata* Steyerem. (22)
Psychotria crocochlamys Sandwith (23)
Psychotria ctenophora Steyerem. (14)
Psychotria cubitalis Standl. & Steyerem. (79)
Psychotria cypellantha Steyerem. (24)
Psychotria debilis Müll. Arg. (25)
Psychotria deflexa DC. (26)
Psychotria deflexa DC. subsp. *campyloneura* (Müll. Arg.) Steyerem. (16)
Psychotria deflexa DC. subsp. *venulosa* (Müll. Arg.) Steyerem. (78)
Psychotria dichotoma (Rudge) Bremek. (27)
Psychotria dichotoma Humb. & Bonpl. ex Roem. & Schult. (27)
Psychotria dichotoma Rudge (40)
Psychotria didymocarpos (A. Rich. ex DC.) Lemée (28)
Psychotria duckei Standl. (2)
Psychotria duricoria Standl. & Steyerem. (29)
Psychotria duricoria Standl. & Steyerem. var. *longiloba* Steyerem. (29)
Psychotria ernestii K. Krause (30)
Psychotria erythrophylla Müll. Arg. (71)
Psychotria everardii Wernham (31)
Psychotria everardii Wernham subsp. *neblinensis* Steyerem. (31)
Psychotria everardii Wernham subsp. *sipapoensis* Steyerem. (29)
Psychotria everardii Wernham subsp. *tatei* (Standl.) Steyerem. (70)
Psychotria fanshawei (Standl.) Steyerem. (32)
Psychotria farameoides Bremek. (33)
Psychotria flavicans Müll. Arg. (40)
Psychotria flavovirens Suess. (46)
Psychotria flexuosa Willd. (8)
Psychotria furcata DC. (40)
Psychotria glabra (Turill) Fosberg (34)
Psychotria glabrescens Müll. Arg. (20)
Psychotria glandulicalyx Steyerem. (35)
Psychotria glandulicalyx Steyerem. subsp. *camaniensis* Steyerem. (35)
Psychotria glandulicalyx Steyerem. subsp. *glandulicalyx* var. *densipubens* Steyerem. (35)
Psychotria gracilentia Müll. Arg. (36)
Psychotria granvillei Steyerem. (37)
Psychotria hancorniifolia Benth. (66)
Psychotria hancorniifolia Benth. var. *angustifolia* Müll. Arg. (66)
Psychotria hancorniifolia Benth. var. *brevifolia* Müll. Arg. (66)
Psychotria hancorniifolia Benth. var. *genuina* Müll. Arg. (66)
Psychotria hancorniifolia Benth. var. *longifolia* Müll. Arg. (66)
Psychotria hancorniifolia Benth. var. *variifolia* Müll. Arg. (66)
Psychotria hancorniifolia Benth. var. *velutipes* (Müll. Arg.) Smith & Downs (66)
Psychotria hemicephaelis Wernham (38)
Psychotria heterocarpa Standl. & Steyerem. (79)
Psychotria heterocephala Müll. Arg. (40)
Psychotria hirsuta Sw. (74)
Psychotria hirta Humb. & Bonpl. ex Roem. & Schult. (39)
Psychotria hoffmannseggiana (Willd. ex Roem. & Schult.) Müll. Arg. (40)
Psychotria hoffmannseggiana (Willd. ex Roem. & Schult.) Müll. Arg. var. *erythrophylla* (Müll. Arg.) Steyerem. (71)
Psychotria hoffmannseggiana (Willd. ex Roem. & Schult.) Müll. Arg. var. *hoffmannseggiana* f. *pubescens* Steyerem. (40)
Psychotria humboldtiana (Cham.) Müll. Arg. (41)
Psychotria hyptoides Benth. (42)
Psychotria imthurniana Oliv. (43)
Psychotria imthurniana Oliv. f. *ptariensis* (Standl. & Steyerem.) Steyerem. (43)
Psychotria interjecta Müll. Arg. (66)
Psychotria inundata Benth. (79)
Psychotria inundata Benth. ex Pulle (79)
Psychotria inundata K. Krause (79)
Psychotria involucrata Sw. (71)
Psychotria involucrata Willd. ex DC. (71)
Psychotria iodotricha Müll. Arg. (44)
Psychotria iodotricha Müll. Arg. subsp. *atricapilla* (Bremek.) Steyerem. (44)
Psychotria iodotricha Müll. Arg. subsp. *multibracteata* Steyerem. (44)
Psychotria iodotricha Müll. Arg. subsp. *multiflora* Steyerem. (44)
Psychotria iquitosensis Standl. (36)
Psychotria janeirensis Müll. Arg. (66)
Psychotria jenmanii Urb. (45)
Psychotria justiciifolia Standl. (46)
Psychotria kaieteurensis Sandwith (47, 64)
Psychotria langsdorffiana Müll. Arg. (46)
Psychotria leucophaea Poepp. (46)
Psychotria longicuspis Müll. Arg. (48)
Psychotria longipes Müll. Arg. (66)

- Psychotria longistipula* Benth. (63)
Psychotria lupulina Benth. (46)
Psychotria lupulina Benth. subsp. *rhodoleuca* (Müll. Arg.) Steyerem. (46)
Psychotria lupulina Benth. subsp. *rhodoleuca* (Müll. Arg.) Steyerem. var. *maypurensis* (Humb. & Bonpl. ex Roem. & Schult.) Steyerem. (46)
Psychotria lupulina Benth. subsp. *rhodoleuca* (Müll. Arg.) Steyerem. var. *maypurensis* (Humb. & Bonpl. ex Roem. & Schult.) Steyerem. f. *pubens* Steyerem. (46)
Psychotria maguireorum Steyerem. (49)
Psychotria martiana Müll. Arg. (27)
Psychotria maypurensis Humb. & Bonpl. ex Roem. & Schult. (46)
Psychotria mazaruniensis Standl. (45)
Psychotria medusula Müll. Arg. (34)
Psychotria megapontica Müll. Arg. (20)
Psychotria microbotrys Ruiz ex Standl. (50)
Psychotria microcephala (Miq.) Miq. (71)
Psychotria microcephala Humb. & Bonpl. ex Roem. & Schult. (71)
Psychotria microcephala Müll. Arg. (71)
Psychotria muscosa (Jacq.) Steyerem. (51)
Psychotria muscosa (Jacq.) Steyerem. subsp. *breviloba* Steyerem. (51)
Psychotria nervosa Benth. (46)
Psychotria nervosa Sw. (46)
Psychotria oblita Wernham (52)
Psychotria oblonga (DC.) Steyerem. (53)
Psychotria officinalis (Aubl.) Rausch. (71)
Psychotria officinalis (Aubl.) Rausch. ex Sandwith (71)
Psychotria officinalis (Aubl.) Rausch. ex Sandwith subsp. *wilhelmensis* Steyerem. (71)
Psychotria oiapoquensis Steyerem. (15)
Psychotria pakaraimensis Steyerem. (54)
Psychotria palicoureoides Mart. (50)
Psychotria palicoureoides Müll. Arg. (50)
Psychotria paniculata (Aubl.) Rausch. (8)
Psychotria paradoxa Müll. Arg. (6)
Psychotria paraensis Müll. Arg. (4)
Psychotria persimilis Müll. Arg. (46)
Psychotria phaneroloma Standl. & Steyerem. (55)
Psychotria phaneroloma Standl. & Steyerem. var. *angustior* Steyerem. (55)
Psychotria phaneroneura Standl. (31)
Psychotria platypoda DC. (27)
Psychotria plocamipes Wernham (56)
Psychotria poeppigiana Müll. Arg. (74)
Psychotria poeppigiana Müll. Arg. subsp. *barcellana* (Müll. Arg.) Steyerem. (74)
Psychotria polycephala Benth. (57)
Psychotria potaroensis (Sandwith) Steyerem. (58)
Psychotria prancei Steyerem. (59)
Psychotria pseudinundata Wernham (60)
Psychotria psittacina Steyerem. (61)
Psychotria ptariensis Standl. & Steyerem. (43)
Psychotria pubescens Sw. (11, 14)
Psychotria pullei Bremek. (62)
Psychotria racemifera Standl. (57)
Psychotria racemosa (Aubl.) Rausch. (63)
Psychotria racemosa Rich. (63)
Psychotria rhodoleuca Müll. Arg. (46)
Psychotria romboutsii Bremek. (6)
Psychotria rosea (Benth.) Müll. Arg. (20)
Psychotria rosea (Benth.) Müll. Arg. var. *rosea* f. *calvescens* Steyerem. (20)
Psychotria rosea (Benth.) Müll. Arg. var. *trichophora* Steyerem. (20)
Psychotria rubra (Willd. ex Roem. & Schult.) Müll. Arg. (40)
Psychotria rudgei Bremek. (46)
Psychotria schomburgkii Benth. (65)
Psychotria sciaphila S. Moore (76)
Psychotria sciaphila subsp. *longicalyx* Steyerem. (76)
Psychotria sessilis (Vell.) Müll. Arg. (66)
Psychotria sessilis (Vell.) Müll. Arg. var. *hancornifolia* (Benth.) Steyerem. (66)
Psychotria sessilis (Vell.) Müll. Arg. var. *angustifolia* (Müll. Arg.) Steyerem. (66)
Psychotria sessilis (Vell.) Müll. Arg. var. *genuina* Müll. Arg. (66)
Psychotria sessilis (Vell.) Müll. Arg. var. *glabrescens* Müll. Arg. (66)
Psychotria sessilis (Vell.) Müll. Arg. var. *plumosa* Müll. Arg. (66)
Psychotria sessilis Vell. (66)
Psychotria setifera Benth. (79)
Psychotria sororapanensis Standl. & Steyerem. (66)
Psychotria spectabilis Steyerem. (2)
Psychotria speluncae Standl. & Steyerem. (67)
Psychotria speluncae Standl. & Steyerem. subsp. *brevicalyx* Steyerem. (67)
Psychotria speluncae Standl. & Steyerem. subsp. *exserta* Steyerem. (67)
Psychotria subcuspidata Müll. Arg. (28)
Psychotria subundulata Benth. (68)
Psychotria surinamensis Bremek. (50)
Psychotria sylvatica Blume (14)
Psychotria tapirapeoana Steyerem. (69)
Psychotria tarapotensis Standl. (46)
Psychotria tatei Standl. (23)
Psychotria tatei Standl. (70)
Psychotria tenerior (Cham.) Müll. Arg. (71)
Psychotria tepuiensis (Steyerem.) Steyerem. (72)
Psychotria tetramera Steyerem. (73)
Psychotria tomentosa (Aubl.) Müll. Arg. (74)
Psychotria tomentosa (Oerst.) Hemsl. (74)
Psychotria transiens Wernham (30)
Psychotria tricholoba Müll. Arg. (75)
Psychotria trichophora Müll. Arg. (76)
Psychotria trichophoroides Müll. Arg. (76)
Psychotria ulviformis Steyerem. (47)
Psychotria urceolata Steyerem. (77)
Psychotria urophylla Schldt. (1)
Psychotria variegata Steyerem. (25)
Psychotria vellosiana Benth. (66)
Psychotria velutipes Müll. Arg. (66)
Psychotria venulosa Müll. Arg. (78)
Psychotria veraguensis Dwyer (50)
Psychotria vermicifolia Standl. (31)
Psychotria villosa Ruiz & Pav. (71)
Psychotria villosa Vell. (71)
Psychotria violacea (Aubl.) Willd. (79)
Psychotria violacea Aubl. (79)
Psychotria viridibractea Steyerem. (80)
Psychotria yutajensis Steyerem. (19)
Ronabea didymocarpos A. Rich. ex DC. (28)
Ronabea erecta Aubl. (9)
Rudgea sessilis (Vell.) Müll. Arg. (66)
Rudgea tillettii Steyerem. (22)
Tapogomea alba Aubl. (4)
Tapogomea glabra Aubl. (34)
Tapogomea muscosa (Jacq.) Poir. (51)
Tapogomea purpurea Aubl. (25)
Tapogomea tomentosa Aubl. (74)
Tapogomea violacea Aubl. (7)
Uragoga alba (Aubl.) Kuntze (4)
Uragoga alba (Aubl.) Pulle (4)

Uragoga alba (Ruiz & Pav.) Kuntze (4)
Uragoga bracteocardia (DC.) Kuntze (14)
Uragoga bracteocardia (DC.) Pulle (14)
Uragoga brevipes (DC.) Kuntze (27)
Uragoga caloneura (Müll. Arg.) Kuntze (66)
Uragoga carapichea Kuntze (40)
Uragoga cornigera (Benth.) Kuntze (28)
Uragoga glabra (Aubl.) Kuntze (34)
Uragoga hirta (Miq.) Pulle (39)
Uragoga humboldtiana (Cham.) Kuntze (41)

Uragoga interjecta (Müll. Arg.) Kuntze (66)
Uragoga janeirensis (Müll. Arg.) Kuntze (66)
Uragoga oblonga (DC.) Kuntze (53)
Uragoga patrisii (DC.) Kuntze (40)
Uragoga poeppigiana (Müll. Arg.) Kuntze (74)
Uragoga purpurea (Aubl.) Kuntze (25)
Uragoga purpurea (Aubl.) Pulle (25)
Uragoga tomentosa (Aubl.) K. Schum. (74)
Uragoga velutipes (Müll. Arg.) Kuntze (66)
Uragoga violacea (Aubl.) Pulle (7)

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REFERENCES

- ANDERSSON, L. 2002. Relationships and generic circumscriptions in the *Psychotria* complex (Rubiaceae, Psychotriaceae). *Syst. Geogr. Pl.* 72:167–202.
- ANDERSSON, L. & J.H.E. ROVA. 1999. The *rps16* intron and the phylogeny of the Rubioideae (Rubiaceae). *Pl. Syst. Evol.* 161–186.
- AUBLET, J.B.C.F. 1775. *Histoire des plantes de la Guiane française*. 4 Vols + Supplement. Didot, Paris. <http://www.biodiversitylibrary.org/item/13825>
- BENTHAM, G. 1841. XVIII.—Contributions towards a Flora of South America.—Enumeration of plants collected by Mr Schomburgk in British Guiana. *J. Bot. (Hooker)* 3:212–250.
- BENTHAM, G. 1845. *The botany of the voyage of H.M.S. Sulphur*. Smith, Elder & Co., London.
- BORHIDI, A. 2011 [2012]. Transfer of the Mexican species of *Psychotria* subgen. *Heteropsychotria* to *Palicourea* based on morphological and molecular evidence. *Acta Bot. Hung.* 53:241–250.
- CANDOLLE, A. P. DE. [Sep] 1830. Rubiaceae. In: A. P. de Candolle, *Prodromus*, Vol. 4. Treuttel & Würtz, Paris, France. Pp. 341–622.
- DAM, J.A.C. VAN. 2002. The Guyanan plant collections of Robert and Richard Schomburgk. In: M.J. Jansen-Jacobs (Ed.), *Flora of the Guianas*, Supplementary Fascicle 3. Royal Botanic Gardens, Kew, Richmond, Surrey, U.K.
- DELPRETE, P.G. 2001. Notes on some South American species of *Psychotria* subgenus *Heteropsychotria* (Rubiaceae), with observations on rubiaceaceous taxonomic characters. *Brittonia* 53:396–404.

- DELPRETE, P.G. 2010. *Palicourea*, *Psychotria* (Rubiaceae.) In: J.A. Rizzo (Coord.), Flora dos Estados de Goiás e Tocantins, vol. 40, Parte 2: Gêneros I–R. IRD/UFG, Universidade Federal de Goiás, Goiânia, Brazil. Pp. 736–815, 842–978.
- DELPRETE, P.G. 2015. Typification and etymology of Aublet's Rubiaceae names. *Taxon* 64:595–624.
- DELPRETE, P.G. & J.H. KIRKBRIDE. 2015. New combinations in *Eumachia* (Rubiaceae) for species occurring on the Guiana Shield. *J. Bot. Res. Inst. Texas* 9:75–79.
- DELPRETE, P.G., L.B. SMITH, & R.B. KLEIN. 2005. *Palicourea*, *Psychotria*. In: A. Reis (ed.), Flora Ilustrada Catarinense, Rubiaceas, Vol. II - Gêneros G–Z: 20. *Gardenia* até 46. *Tocoyena*. Herbário Barbosa Rodrigues, Itajaí, Santa Catarina, Brazil. Pp. 502–512, 525–616.
- DIETRICH, F.G. 1807. *Vollst. Lex. Gärtn.*, vol. 7. Berlin: Gebrüder Gädicke.
- GARDNER, G. 1975. *Viagem ao interior do Brasil*. Tradução de M. Amado. Coleção Reconquista do Brasil, Vol. 13. Ed. Itatiaia, São Paulo.
- HEMSLEY, W.B. 1881. *Biologia Centrali-Americana, Botany*, vol 2. London: R.H. Porter and Dulau & Co.
- HOWARD, R.A. 1989. Rubiaceae. In: R.A. Howard, *Flora of the Lesser Antilles, Leeward and Windward Islands*, Vol. 6 Dicotyledonae – Part 3. Arnold Arboretum, Harvard University, Jamaica Plain Massachusetts, U.S.A. Pp. 389–471.
- IM THURN, E.F. 1886. Notes on the plants observed during the Roraima Expedition of 1884. *Timerhi* 5:145–223.
- JOHANSSON, J.T. 1992. Pollen morphology in *Psychotria* (Rubiaceae, Rubioideae, Psychotrieae) and its taxonomic significance, a preliminary survey. *Opera Bot.* 115:1–36.
- KIRKBRIDE, J.H., JR. 1997. *Manipulus rubiacearum*—VI. *Brittonia* 49:354–379.
- MCNEILL, J., F.R. BARRIE, W.R. BUCK, V. DEMOULIN, W. GREUTER, D.L. HAWKSWORTH, P.S. HERENDEEN, S. KNAPP, K. MARHOLD, J. PRADO, W.F. PRUD'HOMME VAN REINE, G.F. SMITH, J.H. WIERSEMA, & N.J. TURLAND (eds.). 2012. International Code of Nomenclature for algae, fungi, and plants (Melbourne Code). *Regnum Veg.* 154. Königstein: Koeltz Scientific Books. Available at: <http://www.iapt-taxon.org/nomen/main.php>
- MIQUEL, F.A.W. 1844 [1845]. *Symbolae ad Floram Surinamensem – Pars VII. Enumeratio diagnostic plantarum quarundam Surinamensium, a D.D. Hostmann et Kappler collectarum*. *Linnaea* 18:735–756.
- MÜLLER ARGOVIANENSIS, J. 1876. Rubiaceae brasiliensis novae. *Flora* 59(34):540–546.
- MÜLLER ARGOVIANENSIS, J. 1881. Rubiaceae, Tribus VI. Psychotrieae. Pp. 161–469. In: C.F.P. Martius et al. (Eds.), *Flora Brasiliensis*, Vol. 6, Pars 5. Fleischer, Leipzig, Germany.
- NEPOKROEFF, M., B. BREMER, & K.J. SYSTMA. 1999. Reorganization of the genus *Psychotria* and the tribe Psychotrieae (Rubiaceae) inferred from ITS and *rbcl* sequence data. *Syst. Bot.* 24:5–27.
- RAZAFIMANDIMBISON, S.G., C. RYDIN, & B. BREMER. 2008. Evolution and trends in the Psychotrieae alliance (Rubiaceae): a rarely reported evolutionary change of many-seeded carpels from one-seeded carpels. *Molec. Phylogen. Evol.* 48:207–223.
- RAZAFIMANDIMBISON, S.G., C.M. TAYLOR, N. WIKSTROM, T. PAILLER, A. KHODABANDEH, & B. BREMER. 2014. Phylogeny and generic limits in the sister tribes Psychotrieae and Palicoureeae (Rubiaceae): evolution of schizocarps in *Psychotria* and origins of bacterial leaf nodules in the Malagasy species. *Amer. J. Bot.* 101:1102–1126.
- ROBBRECHT, E. & J.-F. MANEN. 2006. The major evolutionary lineages of the coffee family (Rubiaceae, angiosperms). Combined analysis (nDNA and cpDNA) to infer the position of *Coptosapelta* and *Luculia*, and supertree construction based on *rbcl*, *rps16*, *trnL-trnF*, and *atpB-rbcl* data. A new classification in two subfamilies, Cinchonoideae and Rubioideae. *Syst. Geogr. Pl.* 76:85–146.
- SANDWICH, N.Y. 1949. Contribution to the flora of Tropical America: XLIX. *Kew Bull.* 1949:253–264.
- SCHLECHTENDAL, D.F.L. 1856. *Psychotria urophylla*. *Linnaea* 28:522.
- SPRUCE, R. & A.R. WALLACE. 1908. Notes of a Botanist on the Amazon and the Andes, vol. 1. MacMillan and Co., London. <http://www.biodiversitylibrary.org/item/182325>
- STANDLEY, P.C. 1929. Studies of American plants—II. *Publ. Field Mus. Nat. Hist., Bot. Ser.* 4(8):301–345.
- STANDLEY, P.C. 1931. The Rubiaceae of Venezuela. *Publ. Field Mus. Nat. Hist., Bot. Ser.* 7(4):343–485.
- STANDLEY, P.C. 1948. Rubiaceae. In: B. Maguire and Collaborators, *Plant explorations in Guiana in 1944, chiefly to the Tafelberg and the Kaieteur Plateau-V*. *Bull. Torrey Bot. Club* 75(5):566–580.
- STEYERMARK, J.A. & COLLABORATORS. 1953. Botanical explorations in Venezuela—III. No. 3. From Ericaceae through Compositae. *Fieldiana, Bot.* 28(3–4):449–678.
- STEYERMARK, J.A. 1967. Rubiaceae. In: B. Maguire, J.J. Wurdack & Collaborators, *Coord. Botany of the Guayana Highlands, Part VII*. *Mem. New York Bot. Gard.* 17:230–436.
- STEYERMARK, J.A. 1972. *Palicourea*, *Psychotria* (Rubiaceae). In: B. Maguire, J.J. Wurdack & Collaborators (Coord.), *Botany of the Guayana Highlands, Part IX*. *Mem. New York Bot. Gard.* 23:227–832.

- STEYERMARK, J.A. 1974. *Psychotria*, *Palicourea* (Rubiaceae). In: T. Lasser & J.A. Steyermark, eds. Flora de Venezuela, Vol. 9, parte 3. Instituto Botánico, Ministerio de Agricultura y Cría, Caracas, Venezuela. Pp. 1111–1830.
- TAYLOR, C.M. 1996. Overview of the Psychotrieae (Rubiaceae) in the Neotropics. *Opera Bot. Belg.* 7:261–270.
- TAYLOR, C.M. 1997. Conspectus of the genus *Palicourea* (Rubiaceae: Psychotrieae) with the description of some new species from Ecuador and Colombia. *Ann. Missouri Bot. Gard.* 84:224–262
- TAYLOR, C.M. 2001. Overview of the Neotropical genus *Notopleura* (Rubiaceae: Psychotrieae), with the description of some new species. *Ann. Missouri Bot. Gard.* 88:478–525.
- TAYLOR, C.M. 2004. The Neotropical genus *Ronabea* (Rubiaceae, Lasiantheae) *Syst. Geogr. Pl.* 74:35–42.
- TAYLOR, C.M. 2005. *Margaritopsis* (Rubiaceae, Psychotrieae) in the Neotropics. *Syst. Geogr. Pl.* 75:161–177.
- TAYLOR, C.M. 2007. *Psychotria* (Rubiaceae). In: M.G.L. Wanderley et al., eds. Flora Fanerogâmica do Estado de São Paulo, Vol. 5. FAPESP, Editora Hucitec, São Paulo, Brazil. Pp. 389–412, tab. 19.
- TAYLOR, C.M. 2011. The genus *Coccochondra* (Neotropical Rubiaceae) expanded. *Pl. Ecol. Evol.* 144:115–118.
- TAYLOR, C.M. 2012. *Palicourea*, *Psychotria*. Pp. 163–181, 192–241. In: G. Davidse et al. (Org.), Flora Mesoamericana, Vol. 4, parte 2. Rubiaceae a Verbenaceae. Missouri Botanical Garden Press, St. Louis, MO, USA.
- TAYLOR, C.M. 2015a. Rubiacearum americanarum magna hama pars XXXIII: The new group *Palicourea* sect. *Didymocarpae* with four new species and two new subspecies (Palicoureeae). *Novon* 23:452–478.
- TAYLOR, C.M. 2015b. Rubiacearum americanarum magna hama pars XXXIV: The new group *Palicourea* sect. *Tricephalium* with eight new species and a new subspecies (Palicoureeae). *Novon* 24:55–95.
- TAYLOR, C.M. & R.E. GEREAU. 2013. The genus *Carapichea* (Rubiaceae, Psychotrieae). *Ann. Missouri Bot. Gard.* 99:100–127.
- TAYLOR, C.M., D.H. LORENCE, & R.E. GEREAU. 2010. Rubiacearum americanarum magna hama pars XXV: The nocturnally flowering *Psychotria domingensis*–*Coussarea hondensis* group plus three other Mesoamerican *Psychotria* species transfer to *Palicourea*. *Novon* 20:481–492.
- TAYLOR, C.M. & J.A. STEYERMARK. 2004. *Palicourea*, *Psychotria* (Rubiaceae). Pp. 680–694, 706–775. In: Steyermark, J.A. et al., Flora of the Venezuelan Guayana, vol. 8. Missouri Botanical Garden Press, St. Louis.
- WERNHAM, H.F. 1914. New Rubiaceae from Tropical America. – *V. J. Bot.* 52:313–316.