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CLERODENDRUM PANICULATUM var. *DIVERSIFOLIUM* (Vahl) C.B.

Clarke in Hook. f., Fl. Brit. India 4: 593 [as

"*Clerodendron*" and "*diversifolia*"]. 1885.

Synonymy: *Volkameria diversifolia* Vahl ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 593 in syn. 1885; *Clerodendron paniculatum* var. *diversifolia* C. B. Clarke in Hook. f., Fl. Brit. India 4: 593. 1885; *Clerodendron paniculatum* f. *diversifolium* Vahl ex Voss in Vilm., Blumengärt. 1: 831. 1895; *Clerodendrum diversifolium* Vahl, Symb. Bot. 2: 75. 1791; *Clerodendron diversifolium* Raeusch., Nom. Bot., ed. 3, 182. 1797; *Clerodendrum foliis integris, trilobisque ovatis; paniculâ, ramis dichotomis, villosis; pedicellis racemosis* Vahl ex Poir. in Lam., Encycl. Méth. Bot. 5: 167 in syn. 1804.

Bibliography: Vahl, Symb. Bot. 2: 75. 1791; P. Mill., Gard. Dict., ed. 9, 1: *Clerodendrum* 8. 1797; Raeusch., Nom. Bot., ed. 3, 182. 1797; Willd. in L., Sp. Pl., ed. 4 [5], 3(1): 387. 1800; Poir. in Lam., Encycl. Méth. Bot. 5: 167. 1804; Pers., Sp. Pl. 3: 366. 1819; Steud., Nom. Bot. Phan., ed. 1, 207. 1821; Spreng. in L., Syst. Veg., ed. 16, 2: 760. 1825; D. Dietr., Syn. Pl. 3: 617-618. 1842; Manetti, Cat. Pl. Caes. Reg. Modic, suppl. 2: 69. 1845; Walp., Repert. Bot. Syst. 4: 102. 1845; Schau., in A. DC., Prodr. 11: 668-669. 1847; Buek, Gen. Spec. Syn. Candoll. 3: 106. 1858; Bocq., Adansonia, Ser. 1 [Baill., Rec. Observ. Bot.] 3: [Rev. Verbenac.] 214. 1863; C.B. Clarke in Hook. f., Fl. Brit. India 4: 593. 1885; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 561 (1893) and imp. 1, 2: 1219. 1895; Voss in Vilm., Blumengärt. 1: 831-832. 1895; Craib, Kew Bull. Misc. Inf. 1911: 444. 1911; Craib, Contrib. Fl. Siam Dicot. 166. 1912; Rehnelt, Pareys Blumengärt., ed. 1, 280-281. 1932; Burkill, Dict. Econ. Prod. Malay Penins., imp. 1, 1: 589. 1935; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 561 (1946) and imp. 2, 2: 1219 (1946) and imp. 3, 1: 561 (1960) and imp. 3, 2: 1219. 1960; Burkill, Dict. Econ. Prod. Malay Penins., imp. 2, 1: 589. 1965; Mold., Résumé Suppl. 14: 3 & 8. 1966; Mold., Fifth Summ. 1: 282, 443 & 452 (1971) and 2: 870. 1971; Mold., Phytologia 31: 395-396. 1975; Mold., Phytol. Mem. 2: 272, 388 & 541. 1980; H.N. & A.L. Mold. in Dassan. & Fosb., Rev. Handb. Fl. Ceyl. 4: 413. 1983; Mold., Phytologia 59: 344 & 347 (1986) and 63: 57. 1987.

This variety differs from the typical form of the species in having, according to Clarke (1885) the 'upper leaves not lobed", but basally "cordate or hastate".

Vahl's original (1791) description [as quoted by Poiret (1804)] was "foliis integris, trilobisque ovatis; panícula ramis dichotomis, villosis; pedicellis racemosis" or, as quoted by Dietrich (1842) "foliis ovatis angulato-trilobis glaberrimis trinerviis; paniculae trichotomae ramis villosis racemosis". It was said by Vahl to originate "In Ind. or." Clarke (1885), basing his variety *diversifolia* on "*V[olkameria] diversifolia* Vahl Symb. ii. 75" [but Vahl did not place the species in *Volkameria*!], cites a Parish collection from Moulmein, Burma. Craib (1911) cites Kerr 762, also from Moulmein, as probably representing this variety.

Voss (1985) describes the variety as having the "oberen Blätter deren Grund herz- oder spiessförmig ...nicht gelappt. Blütenrispen 10-35 cm lang bei 8-23 cm Breite, weichhaarig, im unteren Teile oft beblättert, sehr, locker; ihre Äste oft verlängert und fast traubig, gewöhnlich rotgefärbt. Kelch 4-6 mm lang, fast bis zum Grunde in schmal-längliche Zipfel deteilt. Blumenkrone leuchtend-rot, porangerot oder fast weiss. Kronröhre 1 1/2- 2 cm lang, fadenförmig."

Poiret (1804) gives a rather lengthy description: "Des rapports nombreux avec le *Clerodendrum trichotomum* pourroient faire croire que cette espèce n'en est qu'une variété; mais on reconnoitra qu'elle doit en être séparée, par ses rameaux velus à leur partie supérieure, par ses feuilles plus étroites, par sa panicule velue, d'abord dichorome, puis terminée par un grand nombre de grappes; enfin par les divisions du calice plus longues.

"Ses tiges sont ligneuses, divisées en rameaux tétragones, creuses à chaque face par un fillon profond, velus à leur partie supérieure, garnis de feuilles opposées, pétiolées, presquovales, glabres, lisses & d'un vert foncé en dessous, rudes & couvertes en dessous d'un grand nombre de petites écailles semblables à celles dont nous avons parlé à l'article du *Clerodendrum squamatum*, longues de six à huit pouces, larges de cinq à six. Les feuilles inférieures, très-grandes, sont échancrées, très-élargies à leur base, divisées à leurs bords cinq grands lobes aigus, celui du milieu beaucoup plus long, très-acuminé; les feuilles supérieures sont plus petite, rétrécies à leur insertion sur le pétiole, & n'ont que trois lobes, les deux latéraux courts, médiocrement aigus. Les pétioles ont à peine un tiers de la longueur des feuilles; enfin, les feuilles terminales sont petites, entières,

lancéolées, sessiles ou rétrécies en pétiole à leur base.

"La panicule est ample, terminale, longue de huit à dix pouces, composée de rameaux velus dans toute leur longueur & sur toutes leurs ramifications. Ces rameaux forment les pédoncules communs, qui sont opposés, très-ouverts, une & deux fois dichotomes, & se terminent par des grappes partielles, le long desquelles sont placées les fleurs, munies chacune d'un pédoncule court. Les feuilles terminales dont nous avons parlé, sont situées à la base de chacun des grands rameaux de la panicule. Le calice est pubescent, partagé en cinq découpures oblongues, aiguës. Le tube de la corolle est d'environ un pouce de long, légèrement pubescent, partagé à son orifice en cinq découpures droites, inégales, linéaires, obtuses, qui se divisent presque en deux lèvres, dont l'inférieure est à trois lobes, les deux latéraux plus courts que celui du milieu. Les étamines sont pourvues de filamens capillaires, une & même presque deux fois plus longs que de la corolle.

"Cette plante croît dans les Indes orientales, d'où Sonnerat en a rapporté des exemplaires qu'il a communiqués au citoyen Lamark. C'est d'après un de ces exemplaires que M. Vahl a décrit & nommé cette plante. (V. s. in herb. Lam.)"

Nothing is known to me of this plant beyond what is stated in its bibliography (above).

CLERODENDRUM PARVITUBULATUM Thomas, Engl. Bot. Jahrb.

68: [Gatt. *Clerodendrum*] 101-102. 1936.

Bibliography: B. Thomas, Engl. Bot. Jahrb. 18, 68, 95 & 101-102. 1936; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 47 & 91. 1942; Hill & Salisb., Ind. Kew. suppl. 10: 55. 1947; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 113 & 183. 1949; Mold., Résumé 139 & 452. 1959; Mold., Fifth Summ. 1: 223 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 214 & 451. 1980.

A partly bushy scandent shrub; branches canescent, 15-20 cm. in diameter [teste Thomas]; branchlets rubiginous, often striate; leaves decussate-opposite, petiolate; petioles 4-8 mm. long, hispidulous with an accessory bud in the leaf axil; leafblades membranous, obovate-oblong, 6-10 cm. long, 3-4 cm. wide, apically obtuse and long-acuminate, marginally undulate, basally rounded-cuneate, glabrous and shiny on both surfaces; inflorescence cymose-paniculate, terminal or cauliflorous; peduncles about 1 cm long, pubescent; pedicels 1-3 mm. long, pubescent; bracts subulate-filiform, 1-5 mm. long, pilose; calyx cylindric-tubular, about 7 mm. long, basally pubescent, 5-dentate to about 1/5 the length, the teeth deltoid, apically acute; corolla

green, the tube 4-5 mm. long, not surpassing the calyx, basally and apically dilated, the limb 5-lobed, the lobes obovate, subequal, 2-3 mm. long, slightly distant, not reclinate; stamens short; filaments 4-5 mm. long, subequal, inserted at the mouth of the corolla-tube; anthers 2 mm. long; style 3-4 mm. long; stigma very shortly bifid; ovary 2 mm. long, subglabrous, dark-fuscos; mature fruit unknown.

This remarkable species is based on Ledermann 5889 from light mountain forest at Muti-Abhang, Mfongu, altitude 1700-1900 m., in the Cameroons. Thomas (1936) notes that "Die Art ist durch die kleine Blütenkrone, die vom Kelch stets umhüllt bleibt, genügend deutlich gekennzeichnet."

A key to help distinguish this species from other African species of Section *Siphonocalyx* will be found under *C. mildbraedii* Thomas in the present series of notes. Nothing is known to me of it beyond what is stated in the bibliography (above). The author's statement regarding the diameter of the branches seems highly questionable -- probably he meant to say 1.5-2 cm.

CLERODENDRUM PARVULUM L.S. Sm., Contrib. Queensl. Herb. 6:[1] & 19-20. 1969.

Bibliography: L.S. Sm., Contrib. Queensl. Herb. 6:[1] & 19-20. 1969; Mold., Fifth Summ. 1: 345 (1971) and 2: 870. 1971; P.G. Wils., Excerpt. Bot. (A) 18: 470. 1971; Heslop-Harrison, Ind. Kew. suppl. 15: 33 & 151. 1954; Mold., Phytol. Mem. 2: 335 & 541. 1980.

A few-branched shrub, about 1 m. tall; branchlets 0.7-2 mm. in diameter, covered with ascending, spreading or curvate, white hairs 0.15-0.5 mm. long, the younger ones more or less stramineous and somewhat compressed, the older ones grayish, terete, and longitudinally fissured; principal internodes 0.3-2.2 mm. long; leaves decussate-opposite or subopposite to ternate or at times spiral, sessile, 'ad apicem projecturae persistentis e ramulo ortae articulata' [fide Smith]; leafblades subcoriaceous, narrowly obovate or narrowly elliptic to narrowly rhomboid "(7.5-4.5:1.0), (0.7) 1.5-2.5 cm longa, (1.5) 2.5-3.5 mm lata" [fide Smith], apically obtuse or subacute, "margine decurva" [fide Smith], basally narrowly cuneate, shortly spreading-pubescent, black-dotted; midrib obscure above, prominent beneath; other venation obscure; flowers single in the leaf-axils or often in 3-flowered cymules; peduncles of the cymules to 1.7 cm. long, pubescent, apically bibracteate, eventually divaricate; pedicels 1.2-1.5 cm. long, bibracteolate above the middle, pubescent, not bracteolate beneath the middle

flower of the cymule; calyx tubular-campanulate, 4.5-5.5 mm. long, subequally 5-lobed, pubescent, the lobes deltoid, about 1.8 mm. long, apically acute, ventrally more or less pubescent; corolla white, the tube more or less cylindric, 8.5-10 mm. long, about 2 mm. wide, slightly oblique at the mouth, externally glabrous, internally pubescent above the insertion of the stamens, the lobes 5, obovate or the anterior one elliptic, 6.6-8.5 mm. long, 4.1-5 mm. wide, apically subrotund or obtuse, marginally ciliate, dorsally slightly pubescent; stamens 4, 9.6-10.8 mm. long, inserted about 3 mm. above the base of the corolla-tube, exerted 5-6.8 mm.; filaments basally barbate, "paribus anterioribus p 1.2 mm longioribus" [fide Smith]; anthers elliptic, about 2.3 mm long; style about 1.25 mm. long, glabrous; stigma shortly bilobed, the lobes 0.7-1 mm. long; ovary subglobose, 1.5 mm. long and wide, glabrous, longitudinally lightly 4-canaliculate, imperfectly 4-celled, 4 ovulate; fruit (immature?) globose, about 7 mm. long and wide, not deeply 5-lobed, basally partly included by the accrescent calyx; seeds not seen.

This remarkable species is based on Pedley 2647 from 35 miles east of Musgrave Telegraph Office, Cook District, Queensland, Australia, collected in June of 1968, deposited in the Queensland Herbarium as No. 78534. Smith notes of it "floribus parvis cum foliis parvis angustis a congeneribus australiensibus diversa".

Smith (1969) comments that "*Clerodendrum traceyanum* (F. Muell.) F. Muell. and *C. holtzei* Blesser are the only other Australian species with the corolla tube less than 1.5 cm. long. However, both have broadly ovate or ovate leaves whereas those of *C. parvulum* are narrowly obovate or narrowly elliptic. It was not possible to place the species in Bakhuizen's treatment of the genus in Malaysia in Bull. Jard. Bot. Buitenz. ser. 3, 3: 73-96 (1921).

"Largely because it was the only tropical member of the family described as having narrow leaves and in some ways resembling *Clerodendrum*, type material of *Huxleya linifolia* Ewart & Rees was kindly compared with the Breeden collection of *C. parvulum* by Mr. J. H. Willis, who confirmed that the two were distinct, *Huxleya* having "...leaves...glabrous, narrow linear, 3-6 mm. long and with tightly revolute margins..." as well as "distinctly quadrangular stems and quite a long corolla-tube". He was also unable to match the Queensland plant among collections at Melbourne of *Clerodendrum* or unplaced Verbenaceae."

Smith cites also Breeden s.n. from "near Musgrave Telegraph Office, +/- 37 mi SW of southernmost part of Princess Charlotte Bay, May 1968" and notes that "Both collectors were able to obtain only a single sheet and stated that the plant was rare. In both localities it was found growing on poorly drained sandy soil in open tea-tree (*Melaleuca* sp.) woodland."

Nothing is known to me of this species beyond what is stated in its bibliography (above).

CLERODENDRUM PAUCIDENTATUM Mold., *Lloydia* 13: 212-213. 1950.

Bibliography; Mold., *Lloydia* 13: 212-213. 1950; E. J. Salisb., *Ind. Kew. suppl.* 11: 56. 1953; Mold., in Humbert, *Fl. Madag.* 174: 149, 178, 179 & 268, fig. 28 (4). 1956; Mold., *Résumé* 156 & 452. 1959; Mold., *Fifth Summ.* 1: 260 (1971) and 2: 870. 1971; Mold., *Phytol. Mem.* 2: 249 & 541. 1980; P. Holmgren et al., *Ind. Vasc. Pl. Types Microf.* 442. 1985; Mold., *Phytologia* 58: 186. 1985.

Illustrations: Mold. in Humbert, *F. Madag.* 174: 179, fig. 28 (4). 1956.

A shrub, 1-3 m. tall, apparently much branched; branches, branchlets, and twigs all very slender, light-gray, wiry, the youngest parts rather densely short-pilose with yellowish upwardly curved hairs, the older parts glabrous; nodes not annulate; principal internodes 0.5-2 cm. long or even more abbreviated; leaves decussate-opposite; petioles filiform, 3-5 cm. long, glabrous or sometimes pilosulous in the channel above, nigrescent; leafblades membranous, nigrescent in drying, narrowly elliptic, 1.5-4 cm. long, 1-1.3 cm. wide, apically blunt or subacute, marginally entire or usually with 1 or 2 coarse, apically acute or subacute teeth at or above the middle, basally acute, glabrous on both surfaces, rather shiny above; midrib very slender, flat on both surfaces or very slightly prominulous beneath; secondaries filiform, about 4 per side, mostly obscure on both surfaces; veinlet reticulation indiscernible on both surfaces; inflorescence terminal, cymose; cymes subcapitate, rather few-flowered, nigrescent in drying; peduncles obsolete or subobsolete and pilose; peduncles filiform, 1-3 mm. long, densely puberulent; bracts and bractlets absent; calyx campanulate, about 2 mm. long, nigrescent in drying, glabrous, the rim very minutely 5-apiculate-toothed; corolla externally white, internally pink, hypocrateriform, the tube very slender, cylindric, 1-2 cm. long, externally glabrous, the limb about 6 mm. wide; stamens exerted about 1 cm. from the corolla-mouth; fruiting-calyx and fruit not known.

This endemic species is based on Service Forestiere 151 from alluvial soil at Bevasaha, in a valley at about 100 m. altitude, Ankarafantaika, Seventh Reserve, Madagascar, collected in March of 1933 and deposited in the Paris herbarium.

A key to help distinguish this species from other Madagascar taxa in this genus will be found under *C. baronianum* Oliv. in the present series of notes [Phytologia 58: 184-190].

Citations: MADAGASCAR: Perrier 10276 (P); Service Forestier 151 (E--photo of type, F--photo of type, Ld--photo of type, N--isotype, N--photo of type, P--type).

CLERODENDRUM PAUCIFLORUM Mold., Lloydia 13: 213. 1950.

Bibliography: Mold., Lloydia 13: 213. 1950; E. J. Salisb., Ind. Kew. suppl. 11: 56. 1953; Mold., in Humbert, Fl. Madag. 174: 154, 229-231 & 268, fig. 37 (4 & 5). 1956; Mold., Résumé 156 & 452. 1959; Mold., Fifth Summ. 1: 260 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 249 & 541. 1980; Mold., Phytologia 58: 189. 1985;

Illustrations: Mold., in Humbert, Fl. Madag. 174: 229, fig. 37 (4 & 5). 1956.

A shrub; branchlets apparently virgate, very slender, obtusely tetragonal, densely appressed-puberulent with yellowish hairs; nodes not annulate; principal internodes 1.5-5 cm. long; leaves decussate-opposite; petioles filiform, 1-2 mm. long, appressed-puberulent; leafblades submembranous, dark-green on both surfaces, brunnescent in drying, elliptic, 2.5-3.5 cm. long, 1.3-1.5 cm. wide, apically acute or slightly attenuate-acute, marginally entire, basally acute, very sparsely and minutely strigillose-puberulent on both surfaces or glabrescent; midrib very slender, flat above, subprominulous beneath; secondaries filiform, 2 or 3 per side, flat or obscure above, subprominulous beneath, arcuate-ascending; veinlet reticulation indiscernible on both surfaces; inflorescence apparently terminating in very short axillary twigs, few-flowered; peduncles filiform, 1-1.5 cm. long, densely appressed-puberulent with yellowish hairs; pedicels filiform, 3-5 mm. long, minutely appressed-puberulent; bractlets obsolete; calyx campanulate, 2-2.5 mm. long, more or less yellowish-strigose toward the apex, the rim plainly 5-lobed, the lobes elongate-linear, divaricately recurved; corolla hypocrateriform, 1 cm. long or less; fruiting-calyx and fruit not known.

This endemic species is based on Garnier 135 from between Tamative and Tananarive, Madagascar, collected in 1869 and deposited in the Paris herbarium. Thus far

the species is known to me only from the original collection.

A key to help distinguish this species from other Madagascar taxa in this genus will be found under *C. baronianum* Oliv. in the present series of notes [Phytol. 58: 184-190].

Citations: MADAGASCAR: Garnier 135 (E--photo of type, F--photo of type, Ld--photo of type, P--type).

CLERODENDRUM PEII Mold., Known Geogr. Distrib. Verbenac., ed. 1, 79. 1942.

Synonymy: *Clerodendron longipetiolatum* P'ei, Mem. Sci. Soc. China 1 (3): 159-160, plate 29. 1932. [not Gürke, 1893].

Bibliography: P'ei, Mem. Sci. Soc. China 1 (3): 125 & 159-160, pl. 29. 1932; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 57, 79, 80 & 91. 1942; Mold., Alph. List Cit. 1: 271. 1946; Mold., Alph. List Inv. Names Suppl. 1: 6. 1947; H.N. & A.L. Mold., Pl. Life 2: 75. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 131 & 183. 1949; E.J. Salisb., Ind. Kew. suppl. 11: 56. 1953; Mold., Résumé 169, 266 & 452. 1959; Mold., Fifth Summ. 1: 288 & 450 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 277 & 541. 1980; Mold., Phytologia 62: 86 & 126. 1987.

Illustrations: P'ei, Mem. Sci. Soc. China 1 (3): pl. 29. 1932.

A shrub about 2.5 m. tall, practically glabrous throughout; leaves decussate-opposite; petioles about 6.5 cm. long, glabrous; leafblades chartaceous, ovate, 13-15 cm. long, 8-9 cm. wide, apically shortly acuminate to an obtuse tip, marginally serrate, basally truncate, glabrous on both surfaces but with "traces of glandular hairs on the midrib beneath" (fide P'ei); secondaries about 5 per side, prominent beneath; inflorescence axillary, cymose, few-flowered; peduncles about 10 cm. long; calyx 5-toothed, with large glands at the base, in fruit about 8 mm. long; fruit drupaceous, subglobose, 5-7 mm. long and wide, glabrous.

This species is based on A. Henry 13511, deposited in the Britton Herbarium at the New York Botanical Garden. P'ei notes that "This species resembles *Clerodendron bracteatum* Wall. but differs by its glabrous leaves, and long-peduncled infructescences." The collector describes it as a "shrub, 7 feet". The species is known thus far only from the original collection and that is in fruit.

A key to help distinguish this species from other Chinese taxa will be found under *C. henryi* P'ei in the present series of notes [Phytologia 60: 180-181].

P'ei's *C. longipetiolatum* (1932) is invalidated by the *C. longipetiolatum* of Gürke in Engl., Bot. Jahrb. 18: 178 (1893).

Citations: CHINA: Yünnan: A. Henry 13511 (N--type, Qu--isotype). MOUNTED ILLUSTRATIONS: P'ei, Mem. Sci. Soc. China 1 (3): pl. 29. 1932 (1d--photo of type, Z--photo of type).

CLERODENDRUM PEREGRINUM Mold., Lloydia 13: 213-214. 1950.

Bibliography: Mold., Lloydia 13: 213-214. 1950; E.J. Salisb., Ind. Kew. suppl. 11: 56. 1953; Mold., in Humbert, Fl. Madag. 174: 155, 235-237 & 268, fig. 38 (3-5). 1956; Mold., Résumé 156 & 452. 1959; Mold., Fifth Summ. 1: 260 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 249 & 541. 1980; Mold., Phytologia 58: 189. 1985.

Illustrations: Mold., in Humbert, Fl. Madag. 174: 235, fig. 38 (3-5). 1956.

A shrub, to 2 m. tall, much-branched; branches, branchlets, and twigs very slender, very obtusely tetragonal or subterete, blackish, glabrate, marked with numerous elevated, whitish, corky lenticels, the youngest parts appressed-pubescent or strigose with very short brownish or stramineous antrorse hairs; nodes not annulate; principal internodes much abbreviated on twigs, mostly 2-10 mm. long, elongated on older wood to 4.5 cm.; leaves decussate-opposite, brunnescent in drying; petioles very slender, 2-5 mm. long, slightly strigillose or glabrescent, brunnescent in drying, flat above; leafblades thin-chartaceous, uniformly dark-green on both surfaces and brunnescent in drying, elliptic or elliptic-ovate, 2-4 cm. long, 1-2.3 cm. wide, apically short-acuminate, marginally entire, basally mostly acute, glabrous or subglabrate on both surfaces, somewhat impressed-punctate beneath; midrib slender, flat on both surfaces or subprominulous beneath; secondaries filiform, about 3 per side, indiscernible above, barely discernible beneath, arcuate-ascending, not anastomosing; veinlet reticulation mostly indiscernible on both surfaces; inflorescence terminal, subcapitate, few- or rather many-flowered, congested, nigrescent in drying, sessile; pedicels filiform, mostly 1-2 mm. long, sparsely appressed-pilosulous or glabrous, nigrescent; foliaceous bracts absent; bractlets obsolete or very minute and setaceous; calyx narrow-campanulate, 2-3 mm. long, about 1 mm. wide, nigrescent, glabrous, its rim truncate and subentire; corolla white, hypocrateriform, its tube narrow-cylindric, 12-20 mm. long, about 1 mm. wide or less, the limb about 8 mm. wide; stamens inserted in

the upper 1/4 of the corolla tube, exserted about 7 mm. from its mouth, the exserted portion violet; anthers oblong; pistil to 3.5 cm. long; fruiting-calyx incrassate, cupuliform, about 1 cm. long and wide, glabrous, longitudinally prominently venose, its rim deeply lobed, the lobes apically subacute, marginally scarious; fruit drupaceous, subglobose, nigrescent in drying, about 1 cm. long and 8 mm. wide, glabrous.

This endemic species is based on Perrier s.n. from somewhere in Madagascar, collected in 1898, and deposited in the Paris herbarium. A key to help distinguish it from other Madagascar taxa in this genus will be found under *C. baronianum* Oliv. in the present series of notes [Phytologia 58: 184-190].

Citations: MADAGASCAR: Baron 4617 (P); Perrier 10217 (P), 10223 (N, P), s.n. [1898] (E--photo of type, F--photo of type, Ld--photo of type, N--photo of type, P--type).

CLERODENDRUM PERRIERI Mold., Lloydia 13: 214-215. 1950.

Bibliography: Mold., Lloydia 13: 214-215. 1950; Mold., Phytologia 4: 45. 1952; E.J. Salisb., Ind. Kew. suppl. 11: 56. 1953; Mold., in Humbert, Fl. Madag. 174: 150, 154, 192-194 & 268, fig. 31 (1-2). 1956; Mold., Résumé 156 & 452. 1959; Mold., Fifth Summ. 1: 260 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 249 & 541. 1980; P. Holmgren et al., Ind. Vasc. Pl. Type Microf. 442. 1985; Mold., Phytologia 58: 181 & 187. 1985.

Illustrations: Mold., in Humbert, Fl. Madag. 174: 193, fig. 31 (1 & 2). 1956.

A shrub, 1-2 m tall, apparently very twiggy; branchlets and twigs very slender, subterete, brownish, densely spreading-pubescent, less so in age, the older wood subglabrate; nodes more or less annulate; principal internodes abbreviated, 0.7-4 cm. long; leaves decussate-opposite or ternate; petioles very slender, 2-6 mm. long, densely spreading-pubescent; leafblades chartaceous, bright-green, somewhat lighter beneath, not nigrescent nor brunnescent in drying, broadly elliptic or elliptic-ovate, sometimes suborbicular, 0.7-2 cm. long (usually less than 2 cm. long), 5-16 mm. wide, apically obtuse or rounded, marginally entire or slightly irregularly subsinuate, basally rounded to acute, rather densely spreading-pubescent on both surfaces, punctate beneath; midrib filiform, flat and obscure above, subprominulous beneath; secondaries filiform, 3 or 4 per side, ascending, mostly indiscernible above, slightly subprominulous beneath; veinlet reticulation indiscernible on both surfaces; inflorescence terminal, capitate, very densely many-

flowered, 1.5-5.6 cm. wide; peduncles obsolete; cyme-branches filiform, densely spreading-pubescent, 1-5 mm. long, mostly obsolete; pedicels obsolete or filiform and about 1 mm. long, very densely spreading-pubescent; calyx campanulate, about 2 mm. long and wide, rather densely spreading-pubescent, its rim very shortly 5-toothed; corolla white, hypocrateriform, its tube very slender, about 1 cm. long, externally glabrate, the limb about 7 mm. wide; stamens and pistil exerted about 1 cm. from the corolla-mouth; filaments rose or pinkish; anthers brown or blackish, especially marginally; fruiting-calyx and fruit not known.

This endemic species is based on Humbert 20214 from a tropophilous forest on schist, in the Sakoa Forest, in the basin of the Onilahy River, at about 300 m. altitude, southwestern Madagascar, collected on February 10 or 11, 1947, and deposited in the Paris herbarium.

This plant has been found growing in tropophilous forests and in the transition zone between bush and low sclerophyllous forest, at 300-900 m. altitude, in flower in December and January.

A key to help distinguish this species from its relatives in Madagascar will be found under *C. baronianum* Oliv. in the present series of notes [Phytologia 58: 184-190]. Seyrig notes that his collection, cited below, is "tres voisin" to the plant represented on his no. 442.

A vernacular name reported for the plant is "selimbiky". Seyrig 438 in the Paris herbarium is mounted on the same sheet as an isotype of *C. magnifolium* (which is *C. subtruncatum* f. *magnifolium*).

Citations: MADAGASCAR: Humbert 11340 (N, P), 13834 (P), 20214 (E--photo of type, F--photo of type, Ld--photo of type, N--photo of type, P--type); Perrier 10234 (P); Seyrig 438 [Herb. Jard. Bot. Tananariva 6093 in part] (N, P, P).

CLERODENDRUM PERRIERI var. *LAXICYMOSUM* Mold., Lloydia 13: 213. 1950.

Bibliography: Mold., Lloydia 13: 213. 1950; Mold., Phytologia 4: 45. 1952; Mold., in Humbert, Fl. Madag. 174: 150, 193, 194 & 268, fig. 31 (3). 1956; Mold., Résumé 156 & 452. 1959; Mold., Fifth Summ. 1: 260 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 249 & 541. 1980; P. Holmgren et al., Ind. Vasc. Pl. Type Microf. 442. 1985; Mold., Phytologia 58: 181 & 187. 1985.

Illustrations: Mold., in Humbert, Fl. Madag. 174: 193, fig. 31 (3). 1956.

This variety differs from the typical form of the species in having its inflorescences at the time of anthesis open and loosely spreading, not congested, the very slender peduncles often being up to 2.5 cm. long and the filiform pedicels up to 1 cm. long.

The variety, apparently endemic, is based in Decary 8533 in part, collected at Ambovombe, southwestern Madagascar, in February of 1931 and deposited in the Paris herbarium. Thus far it is known to me only from the original collection. A key to help distinguish it from its relatives in Madagascar will be found under *C. baronianum* Oliv. in the present series of notes [Phytologia 58: 184-190].

Citations: MADAGASCAR: Decary 8533 in part (N--fragment of type, P--type).

CLERODENDRUM PERRIERI var. *MACROPHYLLUM* Mold., Lloydia 13: 215. 1950.

Bibliography: Mold., Lloydia 13: 215. 1950; Mold., in Humbert, Fl. Madag. 174: 154, 194 & 268. 1956; Mold., Résumé 156 & 452. 1959; Mold., Fifth Summ. 1: 260 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 249 & 541. 1980; P. Holmgren et al., Ind. Vasc. Pl. Type Microf. 442. 1985; Mold., Phytologia 58: 189. 1985.

This variety differs from the typical form of the species in having its mature leafblades to 4.5 cm. long and 2.8 cm. wide.

It is based on Humbert 20145 from the tropophilous forest and xerophilous bush on limestone rocks at Vallon d'Andranolahy, in the valley of the Onilahy River, near Tongobory, western Madagascar, at 50-200 m. altitude, collected on February 5, 1947, and deposited in the Paris herbarium.

A key to help distinguish this plant from its other Madagascar relatives will be found under *C. baronianum* Oliv. in the present series of notes [Phytologia 58: 184-190].

Citations: MADAGASCAR: Grandidier s.n. [Mars 1869] (P); Humbert 20145 (E--photo of type, F--photo of type, Ld--photo of type, N--photo of type, P--type).

CLERODENDRUM PETASITES (Lour.) S. Moore, Jour. Bot.

Brit. 63: 285 [as "*Clerodendron*"]. 1925; E.D.

Merr., Trans. Amer. Philos. Soc., ser. 2,

24(2):338. 1935.

Synonymy: *Volkameria petasites* Lour., Fl. Cochinch., ed. 1, 2: 388-389. 1790; *Clerodendron subpandurifolium* Kuntze, Rev. Gen. Pl. 1: 506. 1891; *Clerodendron robinsonii* Dop, Notul. Syst. 4: 9. 1920; Lecomte, Fl. Gén. Indo-chine 4: 872, fig. 89 (8) & 90 (1 & 2). 1935;

Clerodendron petasites S. Moore apud Fedde & Schust., Justs Bot. Jahresber. 53 (1): 1072. 1932; *Clerodendrum petasites* Moore apud E.D. Merr., Trans. Amer. Philos. Soc., ser. 2, 24 (2): 338 in text. 1935; Santapau, Bull. Bot. Serv. India 3: 14. 1961; *Clerodendrum petasites* (Lour.) Moore apud E. D. Merr., Trans. Amer. Philos. Soc., ser. 2, 24 (2): 338. 1935; *Clerodendrum petasites* (Lour.) A. Meeuse, Blumea 5: 76. 1942.

Bibliography: Lour., Fl. Cocinch., ed. 1, imp. 1, 2: 388-389. 1790; Lour., Fl. Cocinch., ed. 2, 2: 471-473 & 882. 1793; Lour., Fl. Cocinch., ed. 3, 182. 1797; Vent., Jard. Malm. pl. 25. 1803; Pers., Ap. Pl. 3: 364. 1819; Steud., Nom. Bot. Phan., ed. 1, 889. 1821; Walp., Repert. Bot. Syst. 4: 108. 1845; Schau., in A. DC., Prodr. 11: 657 & 667. 1847; Miq., Fl. Ind. Bat. 2: 876. 1856; Buck, Gen. Spec. Syn. Candol. 3: 503. 1858; C.B. Clarke in Hook. f., Fl. Brit. India 4: 594. 1885; Kuntze, Rev. Gen. Pl. 2: 506. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew. suppl. 1, 2: 1219. 1895; E.D. Merr., Interpret. Herb. Amb. 455. 1917; H. Hallier, Meded. Rijks. Herb. Leid. 37: 63. 1918; Dop, Notul. Syst. 4: 9. 1920; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 90. 1921; S. Moore, Journ. Bot. Brit. 63: 285. 1925; Fedde & Schust., Justs Bot. Jahresber. 48 (1): 497. 1927; A.W. Hill, Ind. Kew. suppl. 7: 51. 1929; Hand.-Mazz., Oesterr. Bot. Zeitschr. 80: 343. 1931; Fedde & Schust., Justs Bot. Jahresber. 53 (1): 1072. 1932; P'ei, Mem. Sci. Soc. China 1(3): 130. 1932; Dop in Lecomte, Fl. Gén. Indo-chine 4: 852, 865 & 872-874, fig. 89 (8) & 90 (1-2). 1935; E.D. Merr., Trans. Amer. Philos. Soc., ser. 2, 24 (2): 338 & 420. 1935; E.D. Merr., Brittonia 2: 197. 1936; E.D. Merr., Journ. Arnold Arb. 19: 65. 1938; Meeuse, Blumea 5: 76-77. 1942; Mold., Alph. List Inv. Names 19, 20 & 56. 1942; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 91. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 2: 1219. 1946; Mold., Alph. List Cit. 1: 108. 1946; Mold., Alph. List Inv. Names suppl. 1: 6 & 7. 1947; Mold., Alph. List Cit. 3: 957. 1949; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 136 & 183. 1949; E.J. Salisb., Ind. Kew. suppl. 11: 56. 1953; R. Hay, Gard. Chron. ser. 3, 137: 130 & 154, fig. 63. 1955; Syngé in Chittenden, Roy. Hort. Soc. Dict. Hort., ed. 2, 1: 505. 1956; Mold., Résumé 175, 265, 268, 270, 273, 392 & 452. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 2: 1219. 1960; Hundley & Ko in Lace, Trees Shrubs Burma, ed. 3, 203. 1961; Santapau, Bull. Bot. Surv. India 3: 14. 1961; Anon., Bot. Gard. Glasg. List Seeds 3. 1966; Lour., Fl. Cochinch., ed. 1, imp. 2, 2: 388-389. 1967; Vivekanathan, Bull. Bot. Surv. India 10: 240. 1968; Mold., Fifth Summ. 1: 300, 359,

447, 453, 454, 456 & 464 (1971) and 2: 734 & 870. 1971; Babu, Herb. Fl. DehraDun 398. 1977; Mold., Phytol. Mem. 2: 291, 292, 350, 388 & 541. 1980; Varma, Fl. Bhagalpur Dicot. 309-310. 1981; H.N. & A.L. Mold., in Dassan & Fosb., Rev. Handb. Fl. Ceyl. 4: 463, 467, 473, 475 & 476. 1983; Mold., Phytologia 58: 286 (1985), 59: 104 & 106 (1986), 60: 142 (1986), 61: 180-182 & 186 (1986), 62: 206 (1987) and 63: 61. 1987.

Illustrations: Dop in Lecomte, Fl. Gén. Indo-chine 4: 865 & 874, fig. 89 (8) & 90 (1-2). 1935.

A bush or shrub, 2-3.3 m. tall; stems 1.2-2.5 cm. in diameter; wood very hard; branches subtetragonal, glabrous, the bark rugose and lenticellate; leaves decussate-opposite; petioles slender, 7-10 mm. long, glabrous; leafblades subcoriaceous, oblong or elliptic-oblong, 7-11 cm. long, 3-3.5 cm. wide, apically acute, marginally entire or subentire, basally rounded, glabrous on both surfaces, shiny above; midrib rounded, prominent; secondaries 12-14, the lowest ones opposite and recurved, the remainder alternate, at first straight, then abruptly recurved and anastomosing in intramarginal loops; veinlet reticulation irregular but distinct; inflorescence paniculate, terminal or subterminal, pedunculate, glabrous, 7 cm. long, 5 cm. wide; peduncles 2 cm. long; cyme-ramifications distant, ramosae, the terminal ones 1- or 3-flowered; bracts very small, linear; bractlets almost obsolete; pedicels 5-10 mm. long; flower pendant; calyx campanulate, large, red-violet, 11-12 mm. long, 8 mm. wide, glabrous; the tube almost none, the lobes oval-lanceolate, 4 mm. long, 3-veined, apically acute and apiculate; corolla yellow, glabrous, the tube cylindric, 1 mm. [=cm. fide Dop, but surely not] long, equaling the calyx [fide Dop], the lobes spatulate, 8-9 mm. long, 3-4 mm. wide, subequal, apically rounded; stamens slightly exserted; filaments white, glabrous; anthers oblong; style slender; stigma shortly bifid; ovary glabrous.

The type of this species is based on a Loureiro collection from Cochinchina, deposited in the herbarium of the British Museum. *C. robinsonii* is based on an unnumbered Robinson collection from Nha-trang, a Clemens collection from Tourane, a Poilane collection from Cana, an Eberhardt collection from Thua-luu, Cibi in Thua-thien province, and a Pirey collection from Quang-tri, all the localities being in Annam and all the collections unnumbered (by Dop). It seems most probable that the Robinson collection is no. 1290 coll. betw. March 11 & 26, 1911; the Clemens collection is Clemens & Clemens 4261, and the Eberhardt collection is no. 2662; probably the Robinson collection should be

designated as the type collection. *C. subpandurifolium* is based on Kuntze 3687 from Turong.

This plant has been encountered by collectors in open forests, dense thickets, and dense underbrush near riverbanks, at sea level, in flower from March to July and in October. The Clemenses describe the corollas as white, while Dop refers to them as yellow, with the calyx red-violet. Squires on his no. 329 says "flowers bright-scarlet, with cream petals" [perhaps meaning that the calyx was bright-scarlet and the corolla cream?] but on no. 226 "flowers deep-crimson sheath, lemon-yellow calyx" [probably unintentional reversal of color characters?].

Unfortunately, this species has been badly misinterpreted in the literature and herbaria. Steudel (1821) lists it as "*Volkameria Petasites* Lour., page 10 (not *Clerodendrum infortunatum*)".

Merrill (1935) quotes Loureiro (1790) as saying "Habitat in dumetis Cochinchinae" and then comments that "Loureiro took his specific name [*Petasites*] from *Petasites agrestis* Rumph. (Herb. Amb. 4: 108. pl. 49) which he cites as illustrating his species, but which, however, represents a species very different from *Clerodendrum petasites* Moore. Schauer, perhaps interpreting the species from the Rumphius illustration, erroneously reduced *V. petasites* Lour. to *C. infortunatum* Gaertn. [in spite of Steudel's explicitly stating, in 1821, that it is not *C. infortunatum*]. Loureiro's type is preserved in the herbarium in the British Museum, which on examination Moore found to be identical with *Clerodendrum subpandurifolium* O. Ktze., a species based on specimens collected by Kuntze at Tourane, Annam; Kuntze's actual type is preserved in the herbarium of the New York Botanical Garden; the species is also represented by Squires 329, from the classical locality Hue, and by Robinson 1290 from Nha Trang. *Petasites agrestis* Rumph. which I (Interpret. Herb. Amb. 455. 1917) referred to *Clerodendrum speciosissimum* Van Geert is placed by H. Lam (Bull. Jard. Bot. Buitenzorg III 3: 91. 1921) as a synonym of *Clerodendrum buchanani* (Roxb.) Walp., this apparently being the correct disposition of it." Actually, I place *Petasites agrestis* Rumph. in the synonymy of *Clerodendrum viscosum* Vent.

In his 1936 work Merrill virtually repeated what he said in 1935; in his 1938 work he summarizes the situation as follows: "This fairly well characterized species, known only from Indo-China, was originally described by Loureiro in 1790. Loureiro's type, probably from the vicinity of Hue, being preserved in the Herbarium of the British Museum. Moore examined this in

1925 and found it to be identical with *Clerodendron subpandurifolium* O. Ktze. (1891), type from Tourane. Dop overlooked both species in 1935, having redescribed the same form in 1920 as *Clerodendron Robinsonii* Dop, type Robinson 1290 from Nha Trang. Loureiros specific name should be retained."

Merrill's discussion is very precise and clear and correct. Unfortunately, Meeuse (1942) re-investigated the situation and arrived at an entirely different (and erroneous) conclusion, namely, that *C. petasites* should be the adopted name for *C. viscosum* Vent. His discussion is: "*Clerodendrum Petasites* (Lour.) A. Meeuse, nov. comb. -- *Volkameria Petasites* Lour., Fl. Cochinch. 2, 1790, 388, excl. syn. Rumph. -- *Clerodendron viscosum* Vent., Jard. Malm. 1803, t. 25; Walp., Rep. 4, 1844, 108; Hall. f., Ergebn. 63; Bakh. in Rev. 90 (excl. syn. *Cl. confusum* Hall. f., see Rev. Addit. II-III):, P'ei, Verb. China 130. -- *Clerodendron infortunatum* L., Schau. in DC. 667, pro parte; Miq., Fl. Ind. Bat. 2, 1856, 876, pro parte; C.B. Clarke in Hook. f., Fl. Brit. Ind. 4, 1885, 594, excl. syn. *Cl. viscosum*; *Cl. infortunatum* (haud L., nec Bl., nec Lindl.) Lam, Verb. 284-285; Dop in F. G. I. C. 859; Fletcher, Siam. Verb. 430.

"The nomenclature of this species, currently known as '*Clerodendron infortunatum*' is rather intricate. *Clerodendrum infortunatum* L., Sp. Pl. Ed. 1, 1753, 637 was -- judging from Linné's references to Hermann (Mus. Zeyl., 1717, 25, 29) and to Burman (Thes. Zeyl. 1737, 66, t. 29) in Sp. Pl. and in his Flora Zeylanica 1748, 104, no. 232 -- based on Ceylon material either from the Herb. Hermann, or received from Burman. Anyhow, it is obvious that the name of *Clerodendrum infortunatum* L. should be reserved for the Ceylon species, which was extensively described later on by Trimen in Handb. Fl. Ceylon 3, 1893, 361 and which is apparently endemic in Ceylon. Gaertner, in Fruct. 1, 1788, 271, t. 57, f. 1, described the fruit also from Ceylon material (extant in H. L.-B.).

"Another species described as *Clerodendron viscosum* by Ventenat is quite distinct from *Cl. infortunatum*, but was often confused with it (cf. Hallier l.c. 63-65). It has a rather wide geographical distribution, ranging from British India to South China to the Malay Peninsula, Sumatra and Java. Loureiro's binomial *Volkameria Petasites* was based on *Petasites agrestis* Rumph., Herb. Amb. 6, 1743, 108, t. 49, but his description was from a different plant, so that he actually described a new species. This species was combined with *Clerodendrum viscosum* by Walpers and Backhuizen van den Brink, with '*Cl. infortunatum*' (inclus. *Cl.*

viscosum) by Schauer and with '*Cl. infortunatum*' = *Cl. viscosum* by Dop. Loureiro's statement 'Hab. in dumetis Cochinchinae', indicates that *Volkameria Petasites* is some wild Indo-Chinese species. In our opinion, the only species occurring in these regions to which Loureiro's description is applicable, is *Cl. viscosum* Vent. However, Loureiro's name antedates Ventenat's, so that this necessitates a new combination." Meeuse's argument is rejected by me because he obviously at that time had not consulted Loureiro's type specimen. I have seen type material of all the binomials involved and accept Merrill's conclusion with no reservations.

Meeuse (above) cites the Walpers reference as "1844", but it should be 1845. The so-called *C. petasites* Synge (1956) of Hundley & Ko (1961), Santapau (1961), Vivekanathan (1968), Babu (1977), and Varma (1981) is actually *C. viscosum* Vent. Hundley & Ko actually give as synonyms of *C. petasites*: *C. infortunatum* Gaertn. f., *C. castaneifolium* Klotzsch, *C. cordatum* Don, and *C. viscosum* Vent., all erroneously -- the first is a synonym of *C. infortunatum* L. and all the rest belong to *C. viscosum* Vent. The vernacular name, from Burma, which he records doubtless also belongs, not to *C. petasites*, but to *C. viscosum*. Bakhuizen (1921) reverses the disposition by reducing *C. petasites* to the synonymy of *C. viscosum*, as also does Santapau (1961).

In a letter to me from Dr. Meeuse, dated December 9, 1953, he states that "*Volkameria petasites* Lour. I found that the combination in *Clerodendrum* had already been made before. Also, this is a distinct species (I saw the type) probably confined to Indo-China and possibly identical with one of the species described or mentioned by Dop in Fl. Gen. Indo-Chine 4 (7,8). In this connection I may mention that, later, I received more material of the group of species round *C. infortunatum* L. A careful study of these specimens convinced me of the insufficiency of the differences between *C. adenophyllum*, *C. confusum* and *C. infortunatum* L. (see my key in my 1942 paper on p. 77) and they were treated as one species, *C. infortunatum* L., in the above-mentioned provisional 'Flora of Java'. Actually, I regard the Hallier species quite valid, with differences quite consistent from the true *C. infortunatum* L., which I agree with Meeuse's original (1942) claim is endemic to Sri Lanka.

A key to help distinguish *C. petasites* from related Indochinese species will be found under *C. hahnianum* in the present series of notes [Phytologia 60: 141-143]. Material of *C. petasites* has been misidentified and

distributed in some herbaria as *Volkameria pyramidata* Royen [a synonym of *C. serratum* (L.) Moore].

L. Maurice Mason exhibited a flowering plant, purporting to represent this species, and it received a Royal Horticultural Society (London) Award of Merit on March 22, 1955. The plant was grown by Mr. R. Sayers at Talbot Manor, Fincham, King's Lynn, Norfolk, England, and is described as "An attractive greenhouse shrub with broad ovate leaves, strongly veined, dark-green, about 5 inches long. The broad dense panicle of flowers is about 8 inches long and the tubular corollas, about an inch long, are expanded into a 5-petalled limb an inch across. The flowers are white, flushed with rose in the centre. The effect is enhanced by long exserted stamens." It does not seem possible that this plant was correctly identified. Probably it was *C. viscosum* Vent.

Citations: VIETNAM: Annam: Clemens & Clemens 4261 (N), s.n. [by Great Sapot near Mission, May 1927] (Ca--339961); Eberhardt 2662 (B); Kuntze 3687 (N, N); C.B. Robinson 1290 (N, W--713360); Squires 226 (Ca--305998), 329 (Ca--306090, La, Pd, W--1425798); Cochinchina: Loureiro s.n. (F--photo of isotype, Ld--rubbing of type, Ld--photo of isotype, N--photo of isotype, S--isotype, Sg--photo of isotype); Squires 328 (Bz--20161, N). Tonkin: Pételot 6204 (N). CULTIVATED: Hong Kong: W.Y. Chun 6140 (Ca--357704). MOUNTED ILLUSTRATIONS: Dop in Lecomte, Fl. Gén. Indo-chine 4: 865, fig. 89 (8). 1935 (Ld), fig. 90 (1 & 2). 1935. (Ld); R. Hay, Gard. Chron., ser. 3, 137: 154, fig. 63. 1955. (Ba, Ld).

CLERODENDRUM PETUNIOIDES J.G. Baker, Jour. Linn. Soc.

Lond. Bot. 20: 230 [as "*Clerodendron*"]. 1883;

Mold., Known Geogr. Distrib. Verbenac., ed. 1, 53 & 91. 1942.

Synonymy: *Clerodendron petunioides* J.G. Baker, Jour. Linn. Soc. Lond. Bot. 20: 230. 1883.

Bibliography: J.G. Baker, Jour. Linn. Soc. Lond. Bot. 20: 230. 1883; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 561. 1893; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 53 & 91. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew. suppl, imp. 2, 1: 561. 1946; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 123 & 183. 1949; Mold. in Humbert, Fl. Madag. 174: 151, 199, 202, 203, 266 & 268, fig. 32 (6). 1956; Mold., Résumé 156 & 452. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew. suppl, imp. 3, 1: 561. 1960; Mold., Fifth Summ. 1: 260 (1971) and 2: 870. 1971; Mold., Phytol. Mem. 2: 249 & 541. 1980; Mold., Phytologia 58: 187 & 283. 1985

Illustrations: Mold. in Humbert, Fl. Madag. 174: 199, fig. 32 (6). 1956.

An erect shrub or small tree, to 9 m tall; branchlets and twigs slender, woody, terete, very light-gray, glabrous, shiny, not prominently lenticellate; nodes not annulate; principal internodes 1.5-9 cm. long; leaves decussate-opposite; petioles rather slender, 3-9 mm. long, stramineous, canaliculate above, glabrous, shiny; leafblades subcoriaceous, light-green or bright-green on both surfaces, not at all brunnescent in drying, elliptic to obovate or oblanceolate, 4.5-12 cm. long, 1.7-5 cm. wide, apically acute or acuminate, marginally entire, basally acute or deltoid, glabrous and shiny on both surfaces; midrib slender, slightly prominulous within a channel above, very sharply prominent beneath; secondaries slender, 5-10 per side, prominulous above, sharply prominent beneath, widely divergent, arcuately joined several mm. from the margins beneath; veinlet reticulation very abundant, prominulous on both surfaces on mature leaves; inflorescence axillary and terminal, mostly borne only at the tips of the twigs, 1- to 3-flowered; peduncles mostly much abbreviated or obsolete, similar to the twigs in color and texture; pedicels elongated, stout, 2-3 mm. long, smooth-textured and glabrous; branchlets very small, setaceous or scale-like, 1-2 mm. long, obscure; calyx obconic, subcoriaceous, not particularly heavy, greenish when fresh, slightly brunnescent but not at all nigrescent in drying, apically more or less venose, glabrous, 4-5.7 cm. long, the rim 5-lobed, the lobes erect, triangular-ovate or oblong-deltoid, apically acute, rather shorter than the tube, mostly about 8 mm. long, but the calyx often deeply split on one side to 17 mm.; corolla infundibular, very large, rose-red or purple, the tube equalling the calyx or slightly longer, 6-7.5 cm. long, 6-7 mm. wide in the calyx, gradually ampliate apically in funnelform fashion to 3 cm., externally glabrous, the limb ascending-erect, 6-8 cm. wide, 5-lobed, the lobes equal, oblong, about 3 cm. long, 1.5-2.5 cm. wide, apically rounded; stamens and pistil about equaling the corolla-lobes; fruiting-calyx and fruit not known.

This distinctive endemic Madagascar species is based on Baron 1624 from Ankeramadinika and G.W. Parker s.n. from the forests of the province of Imerina, in central Madagascar, collected in 1881, deposited in the Kew Herbarium.

Collectors have encountered this plant in forests and wet woodlands and along forest roadsides, in flower in August. The corollas are described as "rose" on Catat 1679 and Decary 4434, "rouge" on Decary 4604, "rose vif" on Decary 4834, "rougatre" on Catat 1751,

"rose vivieux" on Decary 5021, and "purple" on Parker s.n.

A key to help distinguish this species from other Madagascar species will be found under *C. baronianum* Oliv. in the present series of notes [Phytologia 58: 184-190].

Citations: MADAGASCAR: Baron 1624 (K--cotype, P--cotype), 6735 (K); Catat 1679 (N, P), 1751 (P); Decary 4434 (P), 4604 (P), 4834 (P), 5021 (P); Kitching s.n. [Ianele] (k); G.W. Parkers.n. [Central Madagascar, 1881] (E--photo of cotype, F--photo of cotype, K--cotype, Ld--photo of cotype, N--photo of cotype); Perrier 4490 (P).

CLERODENDRUM PHILIPPINENSE Elm., Leaflet. Philip. Bot. 9: 3223 [as "*Clerodendron*"]. 1934; Mold., Known

Geogr. Distrib. Verbenac., ed. 1, 62 & 91. 1942.

Synonymy: *Clerodendron philippinense* Elm., Leaflet. Philip. Bot. 9: 3223. 1934.

Bibliography: Elm., Leaflet. Philip. Bot. 9: 3223. 1934; A.W. Hill, Ind. Kew. suppl. 9, imp. 1, 68. 1938; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 62 & 91. 1942; Mold., Alph. List Cit. 2: 462 (1948) and 3: 841. 1949; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 141 & 183. 1949; A.W. Hill, Ind. Kew. suppl. 9, imp. 2, 68. 1958; Mold., Résumé 183, 419 & 452. 1959; Mold., Résumé Suppl. 15: 18. 1967; Mold., Fifth Summ. 1: 316 & 453 (1971) and 2: 776 & 870. 1971; Mold., Phytol. Mem. 2: 307 & 541. 1980; Mold., Phytologia 62: 327. 1987.

A shrub, 1 m. tall; corollas pinkish-white (Ramos & Edano H.P.B.S. 48479).

This species is based on Elmer 22379.

It has been collected in mossy forests, at 4000 feet altitude, in flower in February, March, May, and September; and in fruit in November.

Material of this species has been misidentified and distributed in some herbaria as *C. brachyantherum* Schau., *C. lanuginosum* Blume, *C. macrostegium* Schau., and *C. multibracteatum* Merr. On the other hand, the Fosberg 54722, distributed as *C. philippinense*, actually is *C. philippinum* f. *multiplex* (Sweet) Mold.

Citations: PHILIPPINE ISLANDS: Luzon: Elmer 22379 [R.M. King neg. 296] (Bz--20162--isotype, Ca--7754--isotype, Mi--isotype, N--isotype, N--photo of isotype, W--2605874--isotype, W--photo of isotype); F.C. Gates 7685 (Mi), s.n. [May 31, 1914] (Mi); Loher 12423 (Ca--240578, Mu--4373), s.n. [Rizal Prov., March 1913] (Ca--229209); M. Ramos, Herb. Philip. Bot. Sci. 27367 (Bz--18739); Ramos & Edano, Herb. Philip. Bot. Sci. 48479 (Ca--321580, N, W--1527905).



Moldenke, Harold N. 1988. "NOTES ON THE GENUS CLERODENDRUM VERBENACEAE XXXVIII." *Phytologia* 64, 185–204.

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