

NOTES ON THE GENUS CLERODENDRUM (VERBENACEAE). XVI

Harold N. Moldenke

CLERODENDRUM Burm.

Additional synonymy: *Siphonanthus* Wescott, in herb.

Additional & emended bibliography: Aschers. in G. Schweinf., Beitr. Fl. Aethiop. 1: 119--120 & 278. 1867; F. Muell., Journ. Roy. Soc. N. S. Wales 24: 75. 189. 1891; Briq., Bull. Herb. Boiss., ser. 1, 4: 348--349. 1896; F. N. Will., Bull. Herb. Boiss., ser. 2, 5: 431--432. 1905; Chiov., Nuov. Giorn. Bot. Ital., ser. 2, 29: 117--118. 1922; Chiov., Fl. Somalia 2: 362--364, fig. 208. 1932; Bruggeman, Trop. Pl. 26--27 & 165--167, pl. 8 & 232. 1957; Hansford, Sydowia Ann. Myc., ser. 2, Beih. 2: 689--691, 694, & 697. 1961; A. R. Rees, Journ. Ecol. 52: 9--17. 1964; Anon., Ind. Bibliog. Bot. Trop. 2 (2): 4 & 23. 1965; A. R. Rees, Hort. Abstr. 35: 161. 1965; Van Steen. & Kruseman, Fl. Males. Bull. 4: 1348 & li. 1967; L. S. Sm., Contrib. Queensl. Herb. 6: 20. 1969; Van der Pijl, Princip. Dispers. Higher Pl., ed. 1, 31 & 50. 1969; Anon., Biol. Abstr. 52: 11335 (1971) and 52: B.A.S.I.C. S.51. 1971; Chippendale, Proc. Linn. Soc. N. S. Wales 96: 256. 1971; C. D. Adams, Flow. Pl. Jamaic. 627, 636--637, 794, & 809. 1972; A. L. Mold., Phytologia 23: 318--319. 1972; Maiti, Pl. Sci. Lucknow 6: 104--105. 1974; "B. J. G.", Biol. Abstr. 65: 3289. 1977; Isaacson, Flow. Pl. Ind. 1: 335. 1979; Mold., Phytologia 59: 406--428. 1986.

Ascherson (1867) lists an unidentified species of this genus and another which he calls *Cyclonema* from Ethiopia.

CLERODENDRUM ACERBIANUM (Visiani) Benth.

Emended synonymy: *Clerodendron holstii* Gürke, Abhandl. Preuss. Akad. Wiss. 122: 27 nom.nud. 1894; J. G. Baker in Thiselt.-Dyer, Fl. Trop. Afr. 5: 303. 1900.

Additional & emended bibliography: J. G. Baker in Thiselt.-Dyer, Fl. Trop. Afr. 5: 293--295 & 303. 1900; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 101. 1901; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 43. 1904; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 3, 8, 9, 18, 19, 21, 23, 32, 89, 92, & 93. 1936; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 101. 1941; Mold., Alph. List Cit. 2: 407, 556, 619, & 620. 1948; H. N. & A. L. Mold., Pl. Life 2: 48, 54, & 64. 1948; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 101. 1959; Mold., Phytologia 57: 364--365 & 389--391 (1985), 58: 438 (1985), and 59: 254 & 259. 1986.

Keys to help distinguish this species from other tropical African species of the genus may be found under *C. dinklagei* Gürke and *C. discolor* (Klotzsch) Vatke in the present series of notes.

Additional citations: TANZANIA: Tanganyika: *Holst* 3208 (L).

CLERODENDRUM ACULEATUM (L.) Schlecht.

Additional synonymy: *Clerodendron fruticosum* P. Br. ex Walp., Repert. Bot. Syst. 4: 115. in syn. 1845.

Additional & emended bibliography: Willd. in L., Sp. Pl., ed. 4 [5], 3 (1): 383. 1800; Mold., Geogr. Distrib. Avicenn. 4--12, 14, 20--22, 32, & 36. 1939; Mold., Phytologia 58: 180. 1985.

A key to help distinguish this species from other Cuban taxa in this genus will be found under *C. grandiflorum* (Hook.) Schau. in the present series of notes.

The Fernandez 2328, distributed as *C. aculeatum*, actually is *C. heterophyllum* (Poir.) R. Br.

CLERODENDRUM FLORIBUNDUM var. LATIFOLIUM F. Muell.

Additional bibliography: Mold., Phytologia 59: 422, 424, & 427--428. 1986.

It is worth pointing out here that Domin (1928) states, in his treatment of *C. floribundum*: "Species admodum variabilis, *C. attenuatum* R. Br. et *C. medium* R. Br. amplexens; varietas *ovatum* (= *C. ovatum* R. Br., *C. cardiophyllum* F. v. Muell. et verosimiliter quoque *C. floribundum* var. *latifolia* F. v. Muell. Fragm. IX. 5, 1875) a typo speciei longius distat [my emphasis]".

Nothing else is known to me of this taxon beyond what is stated in its bibliography.

CLERODENDRUM FLORIBUNDUM var. MEDIUM (R. Br.) Mold., Phytologia 39: 236. 1978.

Synonymy: *Clerodendrum medium* R. Br., Prodr. Fl. Nov. Holl., imp. 1, 1: 510--511. 1810. *Clerodendron medium* R. Br. apud Spreng. in L., Syst. Veg., ed. 16, 2: 759. 1825.

Bibliography: R. Br., Prodr. Fl. Nov. Holl., imp. 1, 1: 510--511 (1810) and imp. 2 [Isis 1819:] 152. 1819; Steud., Nom. Bot. Phan., ed. 1, 207. 1821; Spreng. in L., Syst. Veg., ed. 16, 2: 759. 1825; Steud., Nom. Bot. Phan., ed. 2, 1: 383. 1840; D. Dietr., Syn. Pl. 3: 616. 1843; Walp., Repert. Bot. Syst. 4: 105. 1845; Schau. in A. DC., Prodr. 11: 671. 1847; Buek, Gen. Spec. Syn. Candoll. 3: 106. 1858; Benth. & F. Muell., Fl. Austral. 5: 64. 1870; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 561. 1893; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 95, 109, & ix. 1921; Domin, Bibl. Bot. 89: 1112. 1928; Bakh., Journ. Arnold Arb. 10: 73 & 74. 1929; Fedde & Schust., Justs Bot. Jahresber. 53 (1): 1073. 1932; Mold., Alph. List Inv. Names 19. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 561. 1946; Mold., Alph. List Inv. Names Suppl. 1: 7. 1947; Mold., Résumé 266 & 273. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 561. 1960; Mold., Phytologia 39: 236. 1978; Hocking, Excerpt. Bot. A.33: 88. 1979; Mold., Phytol. Mem. 2: 334 & 536. 1980; H. N. & A. L. Mold. in Dassan. & Fosb., Rev. Handb. Fl. Ceyl. 4: 457. 1983; Mold., Phytologia 59: 424. 1986.

This variety is said to differ from the typical form of the species in having the leaf-blades tomentose beneath and the calyx more or less pubescent. Brown's original (1810) description is merely: "foliis ellipticis breve acuminatis subtus tomentosis, calycibus adultis corollisque glabriusculis, corymbis axillaribus terminalibusque laxiusculis".

The variety is based on a collection made by Robert Brown near the Endeavour River and Bay of Inlets in the "Littora Novae Hollan-

diae intra tropicum", Queensland, Australia.

Nothing is known to me of this taxon beyond what is stated in its bibliography (above).. Domin (1928) is of the opinion that it is not sufficiently distinct from the typical form of this variable species to warrant nomenclatural designation. I look forward to how Dr. Munir will treat it.

CLERODENDRUM FORTUNATUM L. in Torner, Cent. Pl. 2: 23 [as "*fortunata*"]. 1756 [not *Clerodendron fortunatum* Blanco, 1837, nor Blume, 1844, nor Burm., 1962, nor Sessé & Moc., 1894].

Synonymy: *Clerodendrum fortunata* L. in Torner, Cent. Pl. 2: 23. 1756. *Clerodendron fortunata* L. apud Osbeck, Dagbok Ostind Resa 228, pl. 11. 1757. *Clerodendrum fortunatum* Retz., Nom. Bot. 155. 1772. *Clerodendrum fortunato* Osbeck apud Scop., Introd. Hist. Nat. 170. 1777. *Volkameria pumila* Lour., Fl. Cochinch., ed. 1, 388. 1790. *Clerodendrum angustifolium* R. A. Salisb., Prodr. Stirp. 108. 1796 [not *Clerodendron angustifolium* (Poir.) Spreng., 1825, nor (Willd.) Hassk., 1844]. *Clerodendrum foliis lanceolatis, integerrimis* L. ex Poir. in Lam., Encycl. Méth. Bot. 5: 164 in syn. 1804. *Clerodendron fortunatum* L. apud K. C. Gmel., Hort. Mag. Duc. Bad. Carlsr. 72. 1811. *Clerodendrum fortunatum* Vent. ex Pers., Sp. Pl. 3: 365. 1819. *Clerodendron pumilum* (Lour.) Spreng. in L., Syst. Veg., ed. 16, 2: 759. 1825. *Clerodendron lividum* Lindl., Edwards Bot. Reg. 11: pl. 945. 1826. *Clerodendrum lividum* Lindl. apud Loud., Hort. Brit., ed. 1, 247. 1830. *Clerodendron fortunatum* Buch.-Ham. ex Wall., Numer. List 82, no. 2652 hyponym. 1831 [not Blanco, 1837, nor Blume, 1844, nor Burm., 1962, nor Sessé & Moc., 1894]. *Clerodendron castaneifolium* Hook. & Arn., Bot. Beech. Voy. 205. 1836. *Clerodendron pentagonum* Hance in Walp., Ann. Bot. Syst. 3: 238. 1852. *Clerodendron oxysepalum* Miq., Journ. Bot. Néerl. 1: 114. 1861. *Clerodendron fortunatum* Wall. ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 596 in syn. 1885. *Clerodendrum castaneifolium* Hook. apud Maxim., Bull. Acad. Imp. Sci. St.-Petersb. 31: 84. 1886. *Clerodendrum pentagonum* Hance apud Maxim., Bull. Acad. Imp. Sci. St.-Petersb. 31: 84. 1886. *Clerodendron pumilum* Spreng. apud Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 561 in syn. 1893. *Clerodendrum fortunatum* Vent. ex Mold., Phytol. Mem. 2: 391 in syn. 1980. *Clerodendron fortunatum* L. ex Mold., Phytol. Mem. 2: 386 in syn. 1980.

Bibliography: L. in Torner, Cent. Pl. 2: 23. 1756; Osbeck, Dagbok Ostind. Resa [Itin.] 228, pl. 11. 1757; L., Amoen. Acad. 4: 320. 1759; L., Sp. Pl., ed. 2, 2: 889. 1763; N. L. Burm., Fl. Indica 137. 1768; Osbeck, Voy. China E. Indies 1: 369, pl. 11. 1771; [Retz.], Nom. Bot. 155. 1772; Scop., Introd. Hist. Nat. 170. 1777; Reichard in L., Syst. Pl. 3: 198. 1780; J. F. Gmel. in L., Syst. Nat., ed. 13, imp. 1, 2: 962. 1789; Lour., Fl. Cochinch., ed. 1, 2: 388. 1790; Nemnich, Allgem. Polyglott. Lex. 1: 1065. 1791; Lour., Fl. Cochinch., ed. 2, 472. 1793; J. F. Gmel. in L., Syst. Nat., ed. 13, imp. 2, 2: 962. 1796; R. A. Salisb., Prodr. Stirp. 108. 1796; P. Mill., Gard. Dict., ed. 9, 1: *Clerodendron* 2. 1797; Raeusch., Nom. Bot., ed. 3, 182. 1797; Willd. in L., Sp. Pl., ed. 4 [5], 3 (1): 386. 1802; Poir. in Lam., Encycl. Méth. Bot. 5: 164. 1804; Willd., Enum. Pl. Hort. Berol. 2: 659. 1809; K. C. Gmel., Hort. Mag. Duc. Bad. Carlsr. 72.

1811; Pers., Sp. Pl. 3: 364 & 365. 1819; Steud., Nom. Bot. Phan., ed. 1, 207. 1821; Link, Enum. Hort. Berol. 2: 127. 1822; Blume, Cat. Gewass., imp. 1, 82. 1823; Blume, Bijdr. Fl. Ned. Ind. 9: 807--808. 1825; Hartweg, Hort. Carlsr. 80. 1825; Spreng. in L., Syst. Veg., ed. 16, 2: 759. 1825; Blume, Bijdr. Fl. Ned. Ind. 14: 807--808. 1826; Lindl., Edwards Bot. Reg. 11: pl. 945. 1826; Sweet, Hort. Brit., ed. 1, 1: 322. 1826; W. Hook., Curtis Bot. Mag. 56 [ser. 2, 3]: pl. 2925 (in textu). 1829; Loud., Encycl. Pl. 522. 1829; Loud., Hort. Brit., ed. 1, 247. 1830; Sweet, Hort. Brit., ed. 2, 415 & 416. 1830; Wall., Numer. List [82]. no. 2652. 1831; Loud., Hort. Brit., ed. 2, 247. 1832; Hook. & Arn., Bot. Beech. Voy. 205. 1836; Blanco, Fl. Filip., ed. 1, 508--509. 1837; G. Don in Loud., Hort. Brit., ed. 3, 247. 1839; G. Don in Sweet, Hort. Brit., ed. 3, 550. 1839; Steud., Nom. Bot. Phan., ed. 2, 1: 383. 1840; Hassk., Flora 25: Beibl. 27. 1842; D. Dietr., Syn. Pl. 3: 616 & 617. 1843; Blanco, Fl. Filip., ed. 2, 355. 1845; Voigt, Hort. Suburb. Calcut. 473. 1845; Walp., Repert. Bot. Syst. 4: 101, 103, 105, & 107. 1845; Schau. in A. DC., Prodr. 11: 657 & 671--674. 1847; Hance in Walp., Ann. Bot. Syst. 3: 238. 1852; Wittstein, Etymolog.-bot. Handwörterb., ed. 1, 206. 1852; Benth. in Hook., Journ. Bot. Kew Gard. Misc. 5: 136. 1852; Seem., Bot. Voy. Herald 405. 1857; Buek, Gen. Spec. Syn. Candoll. 3: 105, 106, & 503. 1858; Benth., Fl. Hongk. 272. 1861; Miq., Journ. Bot. Neerl. 1: 114. 1861; Balf. f., Edinb. New Philos. Journ., ser. 2, 15: 232. 1862; W. Hook., Curtis Bot. Mag. 88 [ser. 3, 18]: pl. 5294 in textu. 1862; Seem., Bonplandia 10: [249]. 1862; Lem., Illust. Hort. 10: pl. 358. 1863; Seem., Fl. Vit. 188. 1866; Hance, Journ. Linn. Soc. Lond. Bot. 13: 117. 1873; C. B. Clarke in Hook. f., Fl. Brit. India 4: 596. 1885; Henriq., Bol. Soc. Brot. 3: 144. 1885; Maxim., Bull. Acad. Imp. Sci. St.-Petersb. 31: 83, 84, & 86. 1886; Maxim., Mém. Biol. 12: 517 & 521. 1886; Forbes & Hemsl., Journ. Linn. Soc. Lond. Bot. 26: 260--261. 1890; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 561. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 143. 1895; Gerth van Wijk, Dict. Plantnames, imp. 1, 1: 335. 1911; Dunn & Tutcher, Kew Bull. Misc. Inf. Addit. Ser. 10: 204 & 205. 1912; Gerth van Wijk, Dict. Plantnames, imp. 1, 2: 505, 554, & 584. 1916; H. Hallier, Meded. Rijks Herb. Leid. 37: 72. 1918; E. D. Merr., Sp. Blanc. 334. 1918; R. N. Parker, For. Fl. Punjab, ed. 1, 400. 1918; H. J. Lam, Verbenac. Malay. Arch. 317 & 363. 1919; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 74, 75, 84, 108, 109, & viii. 1921; Chung, Mem. Sci. Soc. China 1 (1): 228. 1924; R. N. Parker, For. Fl. Punj., ed. 2, 400. 1924; Heyne, Nutt. Plant. Ned. Ind., ed. 2, 2: 1322. 1927; E. D. Merr., Univ. Calif. Publ. Bot. 15: 266. 1929; E. D. Merr., Sunyatsenia 1: 30. 1930; Stapf, Ind. Lond. 2: 238. 1930; P'ei, Sinensia 2: 76. 1932; P'ei, Mem. Sci. Soc. China 1 (3): 125 & 160--162. 1932; Dop in Lecomte, Fl. Gén. Indo-chine 4: 853 & 880--881. 1935; E. D. Merr., Trans. Amer. Phil. Soc., ser. 2, 24 (2): 336 & 420. 1935; W. F. Hoffm., Lingn. Sci. Journ. 16: 301. 1937; Mold., Alph. List Comm. Vern. Names 13. 1939; Mold., Prelim. Alph. List Inv. Names 19--21, 23, & 53. 1940; Mold., Alph. List Inv. Names 16, 18, 19, 21, & 56. 1942; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 54, 57, 58, & 89. 1942; Mold., Phytologia 2: 98. 1945; Savage, Cat. Linn. Herb.

110. 1945; Blume, Cat. Gewass., imp. 2, 82. 1946; Mold., Alph. List Cit. 2: 410 & 556 (1948), 3: 666 & 727 (1949), and 4: 984, 1011, 1012, 1149, 1202, 1226, 1238, & 1243. 1949; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 126, 131, 133, 135, & 181. 1949; Chun & How, Act. Phytotax. Sin. 7: 77. 1958; Mold., Résumé 161, 169, 171, 174, 190, 261, 263, 266--268, 272, 273, 392, & 449. 1959; Gerth van Wijk, Dict. Plantnames, imp. 2, 1: 335 (1962) and imp. 2, 2: 505, 554, & 584. 1962; Tingle, Check List Hong Kong Pl. 38. 1967; Mold., Résumé Suppl. 16: 11 & 20 (1968) and 17: 5 & 8. 1968; D. R. W. Alexander, Hong Kong Shrubs 25. 1971; Gerth van Wijk, Dict. Plantnames, imp. 3, 1: 335 (1971) and imp. 3, 2: 505, 556, & 584. 1971; Mold., Fifth Summ. 1: 272, 287, 292, 293, 299, 322, 441, 445, 449, 452, 453, 461--465, & 467 (1971) and 2: 734, 865, & 972. 1971; Wittstein, Etymolog.-bot. Handwörterb., imp. 2, 206. 1971; Mold. in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 143 & 145. 1973; Mold., Phytologia 28: 448 (1974), 31: 395 (1975), and 34: 264. 1976; Walden, Wild Fls. Hong Kong pl. 40, fig. 110. 1977; Isaacson, Flow. Pl. Ind. 1: 335. 1979; Mold., Phytol. Mem. 2: 259, 277, 281, 282, 291, 313, 349, 386, 391, 394, & 537. 1980; Hu, Enum. Chin. Mat. Med. 55 & 218. 1981; H. N. & A. L. Mold. in Dassan. & Fosb., Rev. Handb. Fl. Ceyl. 4: 419, 427, & 443. 1983; Walden & Hu, Wild Fls. S. China 38, pl. 40, fig. 110. 1984; Mold., Phytologia 57: 334 & 335 (1985), 58: 405, 416, & 417 (1985), and 59: 101. 1986.

Illustrations: Osbeck, Dagbok Ostind. Resa [Itin.] pl. 11. 1757; Osbeck, Voy. China E. Indies 1: pl. 11. 1771; Lindl., Edwards Bot. Reg. 11: pl. 945 (in color). 1826; D. R. W. Alexander, Hong Kong Shrubs 25 (in color). 1971; Walden, Wild Fls. Hong Kong pl. 40, fig. 110. 1977; Walden & Hu, Wild Fls. S. China pl. 40, fig. 110 (in color). 1981.

A herbaceous or low semi-woody or woody subshrub or shrub, 0.5--2 m. tall, ill-smelling, usually with 1 or 2 simple erect stems or few-branched, with all the young parts purplish, the young branches minutely and softly brown-puberulent, becoming glabrescent in age; stems cylindric, ashy-gray or blackish, softly hairy; branchlets cylindric; leaves decussate-opposite; petioles 0.7--2 cm. long, sometimes subulate, almost flat and canaliculate above, rounded beneath, at first densely tomentellous, finally glabrescent; leaf-blades thin-textured (when dried) or fleshy and stiff (when fresh), oblong or broadly oblong to narrowly elliptic, elliptic, oblong-lanceolate, or lanceolate or even subobovate, 5--15 cm. long, 2.5--6 cm. wide, apically acute or acuminate to abruptly short-attenuate, marginally entire, subentire, or subsinuate to irregularly and coarsely dentate or denticulate (except at the base), basally cuneate or rotundate, dull dark-green above, paler green beneath, sparsely pilose on both surfaces to finally glabrous or nearly so, sometimes "subtomentose" (especially on the prominent venation) beneath; midrib often puberulent beneath; secondaries 5--8 pairs, prominent beneath; inflorescence axillary, pedunculate, situated mostly near the tips of the stems or branches, at first densely pubescent or "tomentose", finally glabrescent, much shorter than the subtending leaves, the cymes only 5--10-flowered, trichotomous, 2--4 cm. wide; peduncles very slender, 1.5--2.5 cm. long; pedicels very slender,

0.5--1 cm. long; bracts oval, purple or purplish-red (or white?), apically acuminate; calyx campanulate, ovoid, livid purple or purplish, inflated, 5-angled, about 1.3 cm. long, deeply 5-parted almost to the base, with acute sinuses, the segments broadly ovate, 7--12 mm. long, basally 7--10 mm. wide, apically acute or acuminate, sparsely pubescent or finally glabrescent on both surfaces; corolla hypocrateriform, white or yellowish, often slightly tinged with pinkish or madder-color, slightly longer than the calyx, externally densely pubescent (especially the lobes), the tube subinfundibular, straight, slender, about as long as the calyx, the limb obliquely subrotundate, reflexed in age, 5-parted, the lobes regular, ovate, apically obtuse, finally revolute, the 2 lowermost often projecting; stamens 4, inserted at about the middle of the corolla-tube, nearly equal, shortly exserted or to twice as long as the corolla, declinate, basally pubescent, finally recurved; filaments capillary, white; anthers ovate, sagittate, dark-brown, smooth; style filiform, shorter than the stamens; stigma bifid, the branches apically acute; ovary roundish, externally smooth, 4-celled, each cell 1-ovulate; ovules ascending; fruiting-calyx accrescent, persistent, reddish- or livid-purple; fruit drupaceous, green to red, finally blue or black, globose, about 6 mm. long and wide, 4-lobed.

This distinctive species is native to southeastern China and is based on an unnumbered Osbeck collection in the Linnean Herbarium in London from Dane's Island near Whampoa, below Canton, in Kwangtung, China. I have personally examined this specimen [*Herb. Linnaeus* 789 [810], sheet no. 2], present in Linnaeus' third enumeration and inscribed "fortunatum" in Linnaeus' own handwriting -- it is plainly what we now regard as *C. fortunatum*.

Collectors have encountered *C. fortunatum* on dry open hillsides and grassy slopes under trees in mixed woodland, near streams, and along roadsides, at about 60 m. altitude, in flower and fruit from October to January and May to August. Alexander avers that it flowers "in summer". Lau reports it "rare in loam on dry gentle slopes" in Kwangtung, while Ching says that it is "common" in Kwangsi; Taam found it "abundant on dry clay slopes" in Hong Kong. Woo refers to it as an "herb less than 1 m. tall, common on hillsides" in Hong Kong, the "bracts white, petals purple". Tsang reports it "fairly common in dry clay of meadows" in Kwangsi and "abundant but scattered on dry steep slopes in sandy soil" and "fairly common but scattered in dry sandy soil of meadows" in Kwangtung.

The corollas are described as "white" by most collectors, including on Chan 1057, Chun 9, Hallier 3517, *Herb. Canton Chr. Coll.* 12872, Lau 20169, Peng & al. 872, Taam 1518, Tsang 21072 & 22642, Tsiang 2604, Tsui 419, and Ying 456, as well as by Dunn & Tutcher (1912) and as "white pinkish-tinged" on Chun 6825. However, on Tsui 834 it is stated that the "flowers" were "pink"; on Ying 390 "flowers blue"; on Lau 728, Tak & Chow 2683, and Tsui 548 "flowers red"; on Ying 918 "flowers purple"; on Ching 7830 "flowers purplish"; on Peng 1829 "flowers white & purple"; on Tso 20703 "flowers deep purple"; on Tso 21181 "calyx and unopened flowers purple". One wonders if in at least some of these cases the collectors were referring to the calyx or fruiting-calyx rather than to the corolla, as red,

blue, or purple, but on *Hu* 9322 the collector definitely says "petals pink changing to red." Hooker (1862) refers to the species as "scarlet-flowered". Possibly two color forms exist.

Common and vernacular names for *Clerodendrum fortunatum* include "devil's lantern", "discoloured clerodendrum", "fortuné", "fortunate clerodendrum", "ghost lantern", "gelukkige boom", "gelukkige lotboom", "glorybower", "glückliche Losbaum", "Glücksbaum", "kuei-têng-lung", "k'u-têng-lung", "kwai tang lung", "kwai tang lung shue", "livid-bracted clerodendrum", "livid clerodendrum", "paak fa kwai tang lung", and "spear-leaved clerodendrum". The vernacular name, "pinna", is listed for it from Sri Lanka, but this is erroneous -- "pinna" applies there only to *C. serratum* (L.) Moon.

Clerodendrum fortunatum is said by Sweet (1826) to have been introduced into cultivation in England in 1784 from China, while the so-called *C. lividum* Lindl. was introduced, also from China, in 1824.

Seemann (1862) cites unnumbered collections of Champion, Hance, Seemann, Wilford, and Wright from Hong Kong; of Loureiro, Millet, and Osbeck from Canton; of Robertson from Whampoa; and of Bradley and of Lind from undesignated localities in China, as well as *Fortune* 85 from southern China. He comments that "Die im Linné'schen Herbar aufbewahrten Exemplare stammen verscheinlich von Osbeck; die Standort ist denselben nicht beigefügt. *Clerodendron fortunatum* werd vor etwa 30 Jahren in unseren Gärten eingeführt, und hat es Lindley nach cultivierten Exemplaren als *C. lividum* abgebildet; doch scheint es wieder verschwunden zu sein, wenigsten aus englischen Gärten; in deutschen möcht es vielleicht irgendwo noch stecken."

It should be noted that Seemann (1866) says "I may here remark of a Chinese species (*C. fortunatum*, Linn.) that I was wrong in referring, from description, Loureiro's *Volkameria pumila* (*Clerodendron pumilum*, Spreng.) to it as a synonym. I have since seen the original specimens of *Volkameria pumila*, Loureiro, at the British Museum, and find it to be entirely different from *C. fortunatum*." However, Merrill (1935) tells us that Loureiro's *Volkameria pumila* was described as "Habitat inculta prope Cantonem Sinarum" and that Hemsley (1890) "merely lists Loureiro's species as an obscure plant. The description is good and it applies in essentials to the Linnaean species, the type of which was a specimen from the vicinity of Canton; it may be noted, however, that Seemann.....(1866) states that Loureiro's species is not the same as *Clerodendrum fortunatum* Linn. This, however, may possibly be due to a misinterpretation of the Linnaean species itself. Mr. J. E. Dandy informs me that he could find no specimen of *Volkameria pumila* from Loureiro in the herbarium of the British Museum, nor is the species checked in the Museum copy of Loureiro's *Flora Cochinchinensis* as having been received from him. Loureiro describes the leaves as large and tomentose; they are relatively small, as compared with those of many species of *Clerodendrum* and are nearly glabrous in all specimens of the Linnaean species that I have seen. In the original description of *Clerodendrum fortunatum* Linnaeus states: 'Habitat in India;' the specimen on which the species was based was collected by Osbeck near Canton, China. For a species that presents comparatively little variation, and one that is limited in distribution, it has accumulated a rather long

list of synonyms, all based on material from southeastern China where it is common." In a personal communication to me, Merrill states that "Osbeck's specimens were from Dane's Island near Whampoa, below Canton.....Osbeck.....in describing the same species in 1757 may be excused for his statement that it had not yet been described by any botanist" [when it actually had been described by Eric Torner for Linnaeus in the previous year].

Poiret (1804), after giving a lengthy and detailed description in French, notes that "Cette plante croît naturellement dans l'Inde & à l'île de Java. Sonnerat l'y a recueillie, & en a communiqué des individus au citoyen Lamarck", in whose herbarium he saw a dried specimen. He describes the leaf venation as "Leur principale nervure, assez saillante, se divise en rameaux simples qui se terminent par une courbure, dont le sommet de chaque rameau s'infléchit en arc sur le rameau supérieur, à une petite distance des bords de la feuille. Leur intervalle est occupé par des veines saillantes, surtout à la face inférieure; transverses, disposées en réseau avec d'autres plus petites, placées en un sens opposé aux premières."

The species is used as a medicine by local herbalists in southern China to treat bruises and is marketed as "Ramie *Clerodendri Fortunati*". The plant serves as a host to *Aphis gossypii*.

Of his *C. lividum* Lindley (1826) comments that it is "A new and remarkable species of *Clerodendron* brought from China, for the Horticultural Society, in 1824, by Mr. J. D. Parker. Our drawing was made at the Chiswick garden, in November of the same year."

The *C. fortunatum* accredited to Wallich and to Buchanan-Hamilton was based on Wallich 2652 from Assam, India. The specific epithet, for some reason unclear to me, is sometimes written with an upper-case initial letter.

It should be pointed out here that the *Clerodendron fortunatum* credited to Blume is a synonym of *C. indicum* (L.) Kuntze, that credited to Blanco is *C. minahassae* var. *brevitubulosum* H. J. Lam, that credited to Burman is *C. serratum* (L.) Moon, and that credited to Sessé & Mocino is *C. ligustrinum* (Jacq.) R. Br. The *C. angustifolium* (Poir.) Spreng. also referred to in the synonymy (above) is a valid species, while *C. angustifolium* (Willd.) Hassk. is a synonym of *C. indicum* (L.) Kuntze.

It should also be noted here that the *Arbor zeylanica, fortunata quibusdam* Petiv., the *Frutex flore perlato, fructu rotundo* Kleinhof, and the *Planta fortunata, pinná zeylonensibus* Herm., all included by Poiret (1804) in the synonymy of *C. fortunatum* L., actually all belong in the synonymy of *C. serratum* (L.) Moon.

Among other errors in the literature may be mentioned that the Schauer (1847) reference is mis-quoted as "11: 74" instead of 11: 674 by P'ei (1932), who also mis-cites the Walpers reference as "1844" instead of 1845 and the Lindley reference as "1825" instead of 1826. The Hance (1852) reference is often cited as "1852-1853", the titlepage date. The Hooker & Arnott (1836) reference is often mis-cited as "1841", but actually pages 193 to 288 of the work involved were issued in 1836.

The *Herb. Gassström* 14, cited below, is inscribed "Ex Ind. Orient." but is also inscribed in Chinese on the reverse side, and I assume

that it originated in China, not India. The *Chun* 5007, also cited below, is a mixture of *C. fortunatum* and *C. kaempferi* (Jacq.) Sieb.

Dunn & Tutcher (1912) cite specimens from Happy Valley, above Wanchai Gap, "and elsewhere" in Hong Kong, Lantau Island, Taimoshan, New Territory, and Whampoa.

Hallier (1918) refers to the species as "håufig" in Hong Kong, citing Hallier 3517 in the Hamburg and Leiden herbaria. Maximowicz (1886) cites an unnumbered Hance collection from Whampoa and one of Millett from Canton, adding that "everyone" [omnes] collected it in Hong Kong. Hun & How (1958) cite Lau 28168 and Hainan Exped. 170 from Hainan Island. Bakhuizen (1921) cites only Hance 394 and Weisz 1914 from Whampoa and Hong Kong.

Keys to help distinguish *C. fortunatum* from other taxa occurring in China and in Indochina will be found under *C. canescens* Wall., *C. henryi* P'ei, and *C. hahnianum* Dop in the present series of notes.

Material of *C. fortunatum* has been misidentified and distributed in some herbaria as *C. canescens* Wall., a very different taxon. On the other hand, the *Herb. Schreber* s.n., distributed as *C. fortunatum*, actually is *C. indicum* (L.) Kuntze.

Citations: CHINA: Kwangsi: Ching 7830 (Ca--409506, N, W--1248680); Tsang 22642 (S). Kwangtung: N. J. Andersson s.n. [Whampoa, Dec. 1852] (S, S); Chow & al. 78046 (Ac, N, W--2895269); Chun 9 (N), 3071 (N); Dahlström 325 (S); Ekeberg s.n. [Canton] (Mu--787, S); Hance 394 (S); Herb. Canton Chr. Coll. 12872 (W--1248082); Lau 728 (N), 20169 (Bz--19271, Ca--611465, Mi, N); C. O. Levine, Herb. Canton Chr. Coll. 86 (W--779091), 105 (W--778549), 769 (W--779037); Osbeck s.n. [Canton] (S); Peng 1829 [Herb. Canton Chr. Coll. 13654] (Ca--287560); Peng, Tak, & Kin 872 [Herb. Canton Chr. Coll. 12872] (Ca--274717); Ping 1829 [Herb. Canton Chr. Coll. 13654] (Bz--19273); Ping, Herb. Canton Chr. Coll. 11150 (Bz--19276, W--1248869); Tak, Herb. Canton Chr. Coll. 16624 (Du--200929); Tak & Chow 2683 [Herb. Canton Chr. Coll. 14544] (Ca--319216), 2810 [Herb. Canton Chr. Coll. 14671] (Ca--319346); Tsang 21072 (N, S), 21225 (N, S); Tsang, Herb. Lingnan Univ. 16624 (I); Tsiang 2604 (N); Tso 20703 (N), 21181 (N); Tsui 419 (N, W--1754653), 548 (Ba, Bz--19272, Ca--611718, Mi, Ms, N, Ob--89835, S, W--1754724), 834 (N); Ying 390 (Bz--19275, Du--250186), 456 (Du--250187, N), 779 (Bz--19274, Du--200925), 918 (Ca--359017). Province undetermined: Herb. Gasström 14 (S, S). CHINESE OFFSHORE ISLANDS: Dane's: Herb. Linnaeus 810/2 (Ls--type, N--photo of type); Herb. Osbeck s.n. (S). Honam: C. O. Levine, Herb. Canton Chr. Coll. 306 (W--778637); E. D. Merrill 10142 (Gg--32010). Lantau: Moldenke & Moldenke 28110 (Ac); Tsang, Herb. Lingnan Univ. 16624 (S). HONG KONG: Chan 1057 (Mi); Chun 5007 in part (Du--200923 in part), 5303 (Ca--358076), 6545 (Ca--357981), 6546 (Ca--357982), 6825 (Ca--374003); Dahlström 4 (S); C. Ford s.n. [Hongkong] (N); Fortune 85 (Mu--838); Holman s.n. [July 1911] (Du--66771); Hu 6022 (W--2697288), 9322 (W--2711876); Taam 1518 (Ca--82701, Mi, N, W--2063807); Woo 229 (Mi); C. Wright s.n. [Hongkong] (T, W--44915). HONG KONG OFFSHORE ISLANDS: Little Hong Kong: Ying 612 (Pd). VIETNAM: Tonkin: Balansa 924 (W--2497128). LOCALITY OF COLLECTION UNDETERMINED: Dahl s.n. (S); Gröndahl s.n. (S); Herb. Alstroemer s.n. (S); Herb. Swartz s.n. (S). MOUNTED ILLUSTRATIONS: Lindl., Edwards Bot. Reg. 11: pl. 945.

1826 (Ld, Ld).

CLERODENDRUM FORTUNEI Hemsl. in Forbes & Hemsl., Journ. Linn. Soc. Lond. Bot. 26: 259--260 [as "*Clerodendron?*"]. 1890; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 57 & 89. 1942.

Synonymy: *Clerodendron? fortunei* Hemsl. in Forbes & Hemsl., Journ. Linn. Soc. Lond. Bot. 26: 259. 1890.

Bibliography: Forbes & Hemsl., Journ. Linn. Soc. Lond. Bot. 26: 259--260. 1890; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 101. 1901; P'ei, Mem. Sci. Soc. China 1 (3): 162. 1932; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 101. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 57 & 89. 1942; H. N. & A. L. Mold., Pl. Life 2: 59. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 131 & 181. 1949; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 101. 1959; Mold., Résumé 169, 174, & 449. 1959; Mold., Fifth Summ. 1: 287 & 293 (1971) and 2: 865. 1971; Mold., Phytol. Mem. 2: 277, 282, & 537. 1980.

Hemsley's original (1890) description of this plant is as follows: "Frutex undique glaber, ramulis gracillimis lignosis, cortice albido. Folia longe graciliterque petiolata, valde membranacea, oblonga, cum petiolo usque ad 6 poll. longa, apice abrupte acuminata, basi cuneata, margine integra, utrinque glabra, atro-viridia, venis primariis lateralibus utrinque 5--6 curvatis inconspicuis; petiolus gracilis, teres, usque 2 poll. longus. Flores paucissimi, laxissime paniculati, angustissimi, bipollicares, paniculis terminalibus semipedalibus trichotomis, ramulis pedicellisque elongatis fere capillaribus, bracteis minutis subulatis; calyx glaber, herbaceus, crassiusculus, anguste campanulatus, circiter 3 lineas longus, aequaliter 5-fidus, lobis lanceolatis acutis; corolla puberula, tubo fere filiformi bipollicari leviter curvato, limbi lobis oblongis 3--4 lineas longis; stamina glabra, distincte didynama, vix exserta; ovarium glabrum, obscure lobatum, imperfecte 2-loculare 2-ovulatum? Fructus ignotus."

The species is based on *Fortune 20* from somewhere in China, deposited in the Kew herbarium. Hemsley (1890) continues: "Characterized by an exceedingly slender habit, few very narrow flowers, and scarcely exserted stamens. Until the ovary and fruit are better known the genus must remain doubtful."

Citations: CHINA: Province undetermined: *E. H. Wilson 2770* [Loo-kai] (Ld--photo, N, N--photo, V--10140). HONG KONG: *Fortune 45* (S).

CLERODENDRUM FRIESII K. Schum. in K. Schum. & Lauterb., Nachtr. Fl. Deutsch. Südsee 372 [as "*Clerodendron*"]. 1905; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 67 & 90. 1942.

Synonymy: *Clerodendron friesii* K. Schum. in K. Schum. & Lauterb., Nachtr. Fl. Deutsch. Südsee 372. 1905.

Bibliography: K. Schum. in K. Schum. & Lauterb., Nachtr. Fl. Deutsch. Südsee 372. 1905; Prain, Ind. Kew. Suppl. 3: 44. 1908; H. J. Lam, Verbenac. Malay. Arch. 278 & 363. 1919; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 94, 109, & viii. 1921; H. J. Lam in Lauterb., Engl. Bot. Jahrb. 59: 96. 1921; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 67 & 90. 1942; H. N. & A. L. Mold., Pl. Life 2: 60. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 149

& 181. 1949; Mold., Résumé 200 & 263. 1959; Mold., Fifth Summ. 1: 335 & 445 (1971) and 2: 865. 1971; Mold., Phytol. Mem. 2: 325 & 537. 1980.

A small tree; branches stout, almost 6 mm. in diameter, glabrous; bark black; pith in the internodes dark brownish-gray, with the appearance of being inhabited by ants; leaves decussate-opposite, comparatively long-petiolate; petioles 2.5--4 cm. long, rather deeply canaliculate above; leaf-blades large, subcoriaceous, lanceolate, 18--25 cm. long, 5.5--8.5 cm. wide at the midpoint, apically attenuate-acuminate, basally narrowed or somewhat acuminate, glabrous on both surfaces, black above and brown beneath when dried; secondaries 10 or 11 per side, conspicuous, more prominent beneath than above (as also the veinlet reticulation); inflorescence paniculate, many-flowered, interrupted, 12 cm. long; peduncles to 2 cm. long, slender, glabrous; primary bracts herbaceous, ovate, to 6 cm. long, apically acuminate; rachis glabrous; calyx 5 mm. long, 5-lobed to below the middle, the lobes ovate, apically acute or obtuse, ciliolate, imbricate, overlapping; corolla club-shaped, yellow, apically orange, 2 cm. long, the lobes short; pistil twice as long as the corolla.

This species is based on a 38-cm.-long branch of *Nyman 730*, collected at Sattelberg, at 600 m. altitude, in the Territory of New Guinea, in July, 1899., deposited in the Berlin herbarium, now destroyed.

The collection cited below is a mixture with *C. magnificum* Warb.

Citations: NEW GUINEA: Territory of New Guinea: *W. MacGregor s.n.* [Camp 1, 1889] (Mb).

CLERODENDRUM FRUTECTORUM S. Moore, Journ. Bot. Brit. 57: 249 [as "*Clerodendron*"]. 1919; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 63. 1936.

Synonymy: *Clerodendron frutectorum* S. Moore, Journ. Bot. Brit. 57: 249. 1919. *Clerodendron capitatum* var. *subdentatum* DeWild. ex Mold., Alph. List Inv. Names 16 in syn. 1942. *Clerodendron capitatum* var. *rhodesiense* Mold., Phytologia 3: 263--264. 1950. *Clerodendron capitatum* var. *cordatum* Peter ex Mold., Résumé 261 in syn. 1959.

Bibliography: S. Moore, Journ. Bot. Brit. 57: 249. 1919; A. W. Hill, Ind. Kew. Suppl. 6: 49. 1926; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 9, 36, 63, & 93. 1936; Mold., Alph. List Inv. Names 16. 1942; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 47, 48, & 90 (1942) and ed. 2, 112, 115, & 181. 1949; Mold., Phytologia 3: 263--264. 1950; Mold., Résumé 137, 138, 141, 148, 261, 272, 426, & 449. 1959; Mold., Résumé Suppl. 1: 9. 1959; Mold., Fifth Summ. 1: 221, 228, 235, 245, 441, & 462 (1971) and 2: 865. 1971; Mold., Phytol. Mem. 2: 211, 212, 218, 225, 235, & 537. 1980; Mold., Phytologia 58: 421, 422, & 439 (1985) and 59: 102. 1986.

A shrub, to 3 m. tall, reproducing by suckers; stems and branches rather robust, leafy, rather densely hirtellous or pilose-pubescent with wide-spreading brownish hairs, sometimes trailing; wood light-brown; leaves decussate-opposite; petioles 1.6--16 cm. long, those of the upper leaves 1 cm. or more shorter, all pubescent; leaf-

blades large, membranous, ovate, 14--22 cm. long, 10--14 cm. wide, or the upper ones only 8--10 cm. long and 6--8 cm. wide, apically shortly cuspidate-acuminate (the acumen itself abruptly acute), the larger marginally rather coarsely and irregularly apiculate-dentate from the widest part to the apex with up to about 9 teeth per side and the smaller ones sinuate or all entire or subentire, basally shortly cordate and 5-veined, shiny and regularly pilose with translucent multicellular hairs above, very densely short-pubescent especially on the venation beneath; inflorescence large, congested, at the apex of the branches in the axils of the smaller leaves, plainly stipitate; bracts spatulate, 12--15 mm. long, somewhat shorter than the calyx, apically acuminate, pubescent; pedicels much abbreviated; calyx infundibular, 18 mm. long, pubescent, divided almost to the middle, the lobes ovate-lanceolate, 10 mm. long, apically short-acuminate; corolla white or creamy-white, 5 cm. long, about 3 times as long as the calyx, the tube slender, about 1.25 mm. wide at the middle, 2 mm. wide at the base and 4 mm. wide at the apex, externally glandular-pubescent, the limb broadly ovoid when unopened, the lobes 9 mm. long, 6 mm. wide, apically very obtuse, much shorter than the tube.

This species is based on *Kassner 2473* from among bushes at Shi-wale, Zaire. Moore (1919) notes that it has "Affinity with *C. capitatum* Schum. & Thonn., but quite different leaves and shorter corollas among other features".

Clerodendrum capitatum var. *rhodesiense*, previously regarded by me as a valid taxon, seems, rather, to be identical with Moore's plant, and is, therefore, here reduced to its synonymy. It is based on *E. Milne-Redhead 4303* from *Brachystegia* woodland in the Mwinilunga district of Zambia just south of Matonchi Farm, collected on January 24, 1938, and deposited in the Kew herbarium.

Clerodendrum frutectorum differs from typical *C. capitatum* (Willd.) Schum. & Thonn. in having the stems and petioles rather densely hirsutulous-pubescent with wide-spreading brownish hairs, the upper leaf-surface regularly pilose with translucent multicellular hairs, and the lower leaf-surface very densely short-pubescent, especially on the venation.

Clerodendrum capitatum var. *cordatum* is based on *Peter 35876* from Tanganyika.

Clerodendrum frutectorum has been encountered by collectors in the dense shade of forests, in *Brachystegia* woodlands, and on termittaria, at 1062--1100 m. altitude, in flower in January and March.

It is worth recording that the *Verdick 409* collection is annotated in the Brussels herbarium as "*Clerodendron capitatum* var. *subdentatum* DeWild., nov. var."

The corollas of *C. frutectorum* are described as having been "white" on *Peter 35876* and *Watmough 225* and as "creamy-white" on *Quararé 3102*.

Thomas (1936) cites *Kassner 2473* from Zaire, *Chevalier 832a* and *Passarge 34, 35, & 36* from Nigeria, and *Kersting A.191* from Togo.

Citations: ZAIRE: *Bredo 1048* (Br); *Caton 46* (E--2168594); *Giorgi s.n.* [Envir. Elisabethville 1923] (Br); *Homble 1* (Br); *Kassner 2473* (Br--isotype, Ld--photo of isotype, N--photo of isotype); *Quararé 129*

(Br, Br, N), 1042 (Br), 1093 (Br), 1546 (Br, Br), 3102 (Br, Br, N), 5323 (Br, Br, Br, N); *Robyns* 1525 (Br, Br); *RRPP. Salesiens* S.363 (Br), S.716 (Br); *Verdick* 409 (Br). TANZANIA: Tanganyika: *Peter* 35876 [V.139] (B, B). ZAMBIA: *E. Milne-Redhead* 4303 (N, N--photo); *Watmough* 225 (S).

CLERODENDRUM FUGITANS Wernham, Journ. Bot. Brit. 54: 230--231 [as "*Clerodendron*"]. 1916.

Synonymy: *Clerodendron fugitans* Wernham, Journ. Bot. Brit. 54: 230. 1916. *Clerodendrum fugitans* Wernham apud B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 38, 66, & 93 sphalm. 1936.

Bibliography: Wernham, Journ. Bot. Brit. 54: 230--231. 1916; Fedde & Schust., Justs Bot. Jahresber. 44: 253. 1922; A. W. Hill, Ind. Kew. Suppl. 6: 49. 1926; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 38, 66, & 93. 1936; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 47 & 90 (1942) and ed. 2, 113 & 181. 1949; Mold., Résumé 139 & 449. 1959; Mold., Fifth Summ. 1: 223 (1971) and 2: 865. 1971; Mold., Phytol. Mem. 2: 214 & 537. 1980.

A scandent shrub; stems subterete, subfistular, striate, glabrescent; petioles about 1 cm. long, hirtous-pubescent to glabrescent; leaf-blades thinly membranous, elliptic, 8--11 cm. long, 5--6 cm. wide, apically shortly acute-acuminate, basally rounded, glabrous; secondaries about 4 per side; inflorescence capitate, terminating lateral branchlets, subsessile or very shortly pedunculate, comparatively small, scarcely 3 cm. wide during anthesis; exterior bracts narrowly lanceolate, the interior ones broader, about 1 cm. long, apically very acutely acuminate, silvery ciliate or subglabrous; calyx-tube scarcely 2.5 mm. long, externally glabrous, the lobes to 4.5 mm. long, similar to the bracts in indument, the venation very slender but very distinct; corolla-tube slender, 5.5--6.5 cm. long, externally very sparsely glandular-pilose or glabrous, the lobes elliptic, about 1 cm. long and 5 mm. wide, apically rounded, glabrous on both surfaces.

The species is based on *Bates* 676 from the edge of a path near a forest near Mbimbili, Bitye, in southern Cameroons, collected on December 15, 1914, probably deposited in the British Museum herbarium. Moore (1916) comments that "This is readily distinguished from most of the capitate species by the small heads and small bracts and calyx-lobes, and from *B.[sic] Talbotii* Wernham, its nearest apparent ally, by the much longer corolla-tube."

Thomas (1936) cites only the type collection and states that "Diese Art ist mir nur aus der Beschreibung bekannt; danach dürfte sie der vorigen [*C. cephalanthum* Oliv.] sehr ähnlich sein". Nothing is known to me either of this species beyond what is stated in its bibliography (above).

CLERODENDRUM FULGENS Firminger, Man. Gard. India, ed. 3, 529 & 609 [as "*Clerodendron*"]. 1874; Mold., Phytologia 50: 255 & 268. 1982.

Synonymy: *Clerodendron fulgens* Firminger, Man. Gard. India, ed. 3, 529 & 609. 1874.

Bibliography: Firminger, Man. Gard. India, ed. 3, 529 & 609.

1874; Mold., *Phytologia* 50: 255 & 268. 1982.

Nothing is known to me about this plant beyond the fact that Firminger (1874) implies that it is cultivated in Indian gardens. Presumably it is one of the scarlet-flowered species, perhaps *C. speciosissimum* Van Geert, which is widely cultivated there.

CLERODENDRUM FUSCUM Gürke, *Engl. Bot. Jahrb.* 18: 175 [as "*Clerodendron*"]. 1893; B. Thomas, *Engl. Bot. Jahrb.* 68: [Gatt. *Clerod.*] 35, 61, & 93. 1936.

Synonymy: *Clerodendron fuscum* Gürke, *Engl. Bot. Jahrb.* 18: 175. 1893. *Clerodendron macrocalyx* DeWild., *Bull. Jard. Bot. Brux.* 7: 172. 1920. *Clerodendron grandicalyx* E. A. Bruce, *Kew Bull. Misc. Inf.* 1934: 306. 1934. *Clerodendrum macrocalyx* DeWild. apud B. Thomas, *Engl. Bot. Jahrb.* 68: [Gatt. *Clerod.*] 61 & 94 in syn. 1936. *Clerodendrum fuscum* Vatke ex Mold., *Résumé Suppl.* 3: 31 in syn. 1962. *Clerodendrum fuscum* Gilg ex Mold., *Résumé Suppl.* 18: 9 in syn. 1969.

Bibliography: Gürke, *Engl. Bot. Jahrb.* 18: 175. 1893; Gürke in *Engl., Pflanzenw. Ost-Afr. C*: 341. 1895; Durand & DeWild., *Bull. Soc. Roy. Bot. Belg.* 37: 124. 1898; J. G. Baker in *Thiselt.-Dyer, Fl. Trop. Afr.* 5: 294 & 304--305. 1900; Durand & Jacks., *Ind. Kew. Suppl.* 1, imp. 1, 101. 1901; DeWild., *Ann. Mus. Cong. Belg. Bot.*, ser. 5, 3: 134 & 255 (1909) and ser. 5, 3: 468. 1912; DeWild., *Bull. Roy. Soc. Bot. Belg.* 51 (3) [ser. 2, 1]: 91, 132, & 233. 1913; De Wild., *Bull. Jard. Bot. Brux.* 7: 172. 1920; DeWild., *Pl. Bequaert.* 2: 264--265. 1922; Fedde & Schust., *Justs Bot. Jahresber.* 48 (1): 497 (1927) and 53 (1): 1072. 1932; Bruce, *Kew Bull. Misc. Inf.* 1934: 306. 1934; B. Thomas, *Engl. Bot. Jahrb.* 68: [Gatt. *Clerod.*] 35, 61, & 93. 1936; A. W. Hill, *Ind. Kew. Suppl.* 9: 68. 1938; Durand & Jacks., *Ind. Kew. Suppl.* 1, imp. 2, 101. 1941; Mold., *Alph. List Inv. Names* 18. 1942; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 1, 48, 49, & 90. 1942; Mold., *Alph. List Inv. Names Suppl.* 1: 6. 1947; W. Robyns, *Fl. Sperm. Parc Nat. Albert* 2: 140 & 143. 1947; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 2, 115, 116, & 181. 1949; Mold., *Biol. Abstr.* 27: 1887. 1953; Hauman, *Assoc. Etud. Tax. Fl. Afr. Trop. Ind.* 1954; Durand & Jacks., *Ind. Kew. Suppl.* 1, imp. 3, 101. 1959; Mold., *Résumé* 141, 143, 144, 216, 263, 264, 266, & 449. 1959; Mold., *Résumé Suppl.* 1: 10 (1959), 12: 6 (1965), and 18: 9. 1969; Bouquet, *Invent. Pl. Méd. Tox. Cong. Braz.* 32. 1967; Mold., *Fifth Summ.* 1: 228, 232, 233, 235, 242, 358, 445, 446, 450, & 462 (1971) and 2: 865. 1971; Lewalle, *Bull. Jard. Bot. Nat. Belg.* 42 [Trav. Univ. Off. Bujumb. Fac. Sci. C.20]: [230]. 1972; Lebrun & Stork, *Ind. Cart. Répart. Pl. Vasc. Afr.* 32. 1977; Mold., *Phytol. Mem.* 2: 217, 218, 222, 223, 225, 232, 349, & 537. 1980; Mold., *Phytologia* 58: 441 (1985) and 59: 112, 255, & 358. 1986.

An erect, scrambling, or scandent, brown- or violet-pubescent shrub or small, slender, sarmentose, woody, sun-loving liana, to 8 m. long; stems hollow; young branches and branchlets short-pubescent with dark-brown articulated hairs; leaves decussate-opposite, the upper ones sessile or subsessile, the lower ones long- and short-petiolate; petioles absent or 0.5--5.5 cm. long, more or less brown-

or violet-villous, articulated at the base or 3--5 mm. above the base, leaving a stout, oblique projection after falling (which aids in climbing); leaf-blades papery-coriaceous, sometimes stiff and scabrous or soft and supple, broadly ovate or oval-orbicular to subrotund, 6--20 cm. long, 4--15.5 cm. wide, apically more or less abruptly acuminate (the acumen itself apically acute) or rounded to a short mucro, marginally entire, basally deeply cordate with a rounded sinus, hirtous with violet or brown articulated and appressed hairs on both surfaces (chiefly on the venation), more sparsely so or glabrescent above, densely scrobiculate (under a hand-lens) beneath, with 3 basal secondaries and 4 or 5 lateral ones, all anastomosing; inflorescence cymose, the cymes axillary or terminal, corymbose, oval, few-flowered, more or less long-pedunculate, to 20 cm. wide, generally paired, di- or trichotomous; bracts and bractlets linear, cream-yellow, the lower ones to 1 cm. long, the upper shorter, to 5 mm. long, all shortly reddish-villous; peduncles 2--9 cm. long, tomentose; rachis and cyme ramifications tomentose; pedicels to 2 cm. long, shortly villous; flowers inodorous; calyx more or less campanulate, white, yellowish-white, or cream-color to pale-yellow or yellow, finally turning violet, showy, 1.6--2.8 cm. long, 8--12 mm. wide, externally sparsely pubescent with dark-brown articulated hairs, 5-parted to 1/3 its length, ciliate, the lobes ovate to lanceolate or deltoid, 1.9--2.2 cm. long, basally 6--7 mm. wide, apically acute or acuminate; corolla zygomorphic, hypocrateriform, white or yellowish-white or internally white and red-spotted, externally purple-red, the tube slender, 1.5--3 cm. long, almost twice as long as the calyx, externally densely reddish-pilose or sparsely glandular-villous, the 5 lobes imbricate in bud, 5--10 mm. long, the 3 upper ones with a red spot; stamens olivaceous, long-exserted; filaments green; style deep-violet, long-exserted, filiform, 6 cm. long, as long as the stamens; stigma bifid; fruiting-calyx persistent, rosy- or violet-white to mauve "no. 44 on the Ségué color-chart" (1936), composed of 5, free, oval lobes, enclosing the fruit; fruit drupaceous, at first dark-green, later black, globose or subglobose, 12--13 mm. long, 12 mm. wide, externally glabrous and shiny.

This species is based on *Stuhlmann* 3061 & 3096 from the mountains of Kajonsa, West Mpororo, Tanganyika, collected, respectively, on January 28 and 30, 1892, and *Pogge* 335 from along the Lulu River at 9½ S. lat., in May of 1876, deposited in the Berlin herbarium, now doubtless destroyed. *Clerodendron macrocalyx* is based on *Bequaert* 1637, 2031, & 6492, the first from a secondary forest at Bomili, collected on December 26, 1913, the second [now regarded as representing var. *attenuatum* Mold.] from a forest at Avacubi, collected on January 20, 1914, and the third from between Masisi and Walikale, collected on January 4, 1915 -- all in Zaire and deposited in the Brussels herbarium. Of this taxon DeWildeman (1922) comments: "Cet-te plante est indiscutablement voisine du *C. scandens* Pal. Beauv. (cf. Baker in Flora of trop. Afr. V. p. 304), dont elle se différencie très fortement par les dimensions de son calice profondément divisé en 5 lobes aigus." *C. grandicalyx* is based on *Rogers & Gardner* 319 from Uganda in the Kew herbarium,

Collectors have encountered *Clerodendrum fuscum* in shady, tropoph-

ilous, virgin and secondary forests, the edges of gallery forests, in sandy soil, sunny or partly sunny clearings, and old deforested and abandoned cultivated areas, at 470--2000 m. altitude, in flower in January, June, July, and December, and in fruit in January, May, and August. Rogers & Gardner speak of it as "rare" in Uganda, but Louis refers to it as "rather common" in Zaire. Troupin refers to it as a "herbaceous liana" -- manifestly a contradiction in terms.

Goossens reports that the juice of the crushed leaves is used by natives in the treatment of headaches -- "une gouette est introduite dans la commissure de yeux".

Vernacular names reported for the species are "boondo makila", "boondo na n'gula", "boone nala", "ifonge", "kamakula", "kasabiniola", "lungungu", "mbabi", "mbambake", "ndambula", "wangange", and "yangange".

The corolla is described as having been "white" on *Bequaert* 1637 and *Troupin* 5524 & 6299, "yellow" on *Gillard* 369, "cream with a central spot of wine-red" on *Louis* 1091, "pale-yellow with a large spot of dark-purple in the center" on *Louis* 12781, "ivory-white with a deep purple-red spot" on *Bequaert* 2031, "yellowish-white, the 3 upper petals with a red spot" on *Bequaert* 6492, "yellow, the 2 large lobes vivid-red" on *Lebrun* 3233, "cream, the 3 upper petals turned back and splashed with crimson" on *Rogers & Gardner* 319, "cream-yellow with a carmine-lake spot [71 in the Séguy color-chart]" on *Louis* 13065, and "the upper lip carmine-red" on *Gossweiler* 14040. On *Louis* 1292 it is described as "jaune-crème, mais plus ou moins maculés de lateraux rouge-grosseille sur leur moitié", while on *Louis* 9814 it was "jaunâtre pâle, la corolle largement maculé d'un beau rouge pourpre surtout la levre inférieure". It is possible that several distinct color-forms are involved here.

Gürke (1895) describes the plant as "Ein mit braunen Haaren dicht besetzter Strauch mit herzförmigen, stengelumfassenden B[lätter] und grossen gelben Kelchen".

Baker (1900) cites *Stuhlmann* 3061 & 3096 from Tanganyika, *Dupuis* s.n. from Lower Congo, and *Preuss* s.n. from Lunda. DeWildeman (1912) cites *Allard* 464 & s.n., *Claessens* 292, *Janssens* s.n., *Jespersen* s.n., *Seret* 858bis, and *Vanderyst* s.n. from Zaire. In his 1909 work he cites *Flamigni* 114, *Huyghe* s.n., *Laurent* 1955 & s.n., *Pynaert* 245 & 292, *Sapin* s.n., and *Seret* 460. Thomas (1936) cites *Mildbraed* 1060 & 1232 and *Stuhlmann* 3061 & 3096 from Tanganyika and *Bequaert* 6492, *Dupuis* s.n., and *Pogge* 335 from Zaire.

Robyns (1947) describes *Clerodendrum fuscum* as an "Arbuste lianiforme, se rencontrant dans tout les districts du Congo Belge occidental, sauf le District Côtier, et s'étendant à travers de District des Lacs Edouard et Kivu jusque dans le Ruanda et le Sud-Ouest de l'Uganda (Mpororo). Il croît de préférence dans les formations forestières équatoriales et dans les défrichements forestiers". He cites *Humbert* 8682. Lewalle (1972) cites *Lewalle* 604 from Burundi.

Bruce (1934) asserts that her *C. grandicalyx* is distinguished by its conspicuous calyx, but "in other respects it is very similar to *C. cordifolium* A. Rich."

It may be noted, in passing, that the Gürke (1893) reference in this species' bibliography (above) is sometimes cited as "1894";

similarly, the DeWildeman (1913) reference is sometimes mis-cited as "1912", the titlepage date.

A key to help distinguish *C. fuscum* from other tropical African species of the genus will be found under *C. dinklagei* Gürke in this present series of notes [59: 254--255].

The unnumbered Elskens collection cited below is a mixture of *C. fuscum* and leaves of *C. splendens* G. Don, while *Vanderyst* 19139 is a mixture with *C. excavatum* DeWild.

Material of *Clerodendrum fuscum* has been misidentified and distributed in some herbaria as *C. splendens* G. Don and *C. thompsonii* Balf. [= *C. thomsonae* Balf. f.]. On the other hand, the *Léontovitch* 197, distributed as *C. fuscum*, actually is *C. splendens* G. Don.

Citations: ZAIRE: *Allard* 416 (Br), 464 (Br); *Bequaert* 1637 (Br), 6492 (Br, Ld--photo, N, N--photo); *Berger* s.n. [1909] (Br); *Boone* 71 (Br); *Callens* 1725 (N), 2961 (N), 3651 (N), 3943 (N), 4937 (Gg); *Claessens* 292 (Br); *Collector undetermined* 507 (Br); *Dupuis* s.n. [Juillet 1893] (Br); *Elskens* s.n. [5 Mai 1913] in part (Br), s.n. [15 Juin 1913] in part (Br); *Flamigni* 114a (Br); *G. Gilbert* 65 (Br); *Gillardin* 369 (Br, Br, N), 373 (Br, Br), 504 (Br, Br); *Gillet* 193 (Br), 804 (Br), 3004 (Br), 3330 (Br), s.n. [Kisantu 1900] (Br), s.n. [Aout 1902] (Br, N); *Goossens* 1554 (Br, Br, N), 6055 (Br, N), 6125 (Br), 6160 (Br), 6164 (Br); *Hulstaert* 337 (Br), 585 (Br), 586 (Br), 599 (Br); *Humbert* 8343 (B, Br); *Janssens* s.n. [1909] (Br); *Jespersen* s.n. [1910] (Br); *M. Laurent* 1916 (Br); *Laurent & Laurent* s.n. [18-11-03] (Br), s.n. [18-12-03] (Br), s.n. [20-11-03] (Br); *Lebrun* 691 (Br), 3233 (Br, Br), 5544 (Br, Br), 5587 (Br, Br); *Louis* 876 (Br, S), 1091 (B, Br, Ca--962229, N, Vi), 1292 (Br), 5839 (Bm, Br), 9814 (Br, N), 10044 (Br), 12781 (Br), 13065 (Br, W--2091099); *Putnam* 9 (Br), *M.479* (Br); *W. Robyns* 1332 (Br, Br); *Roehoudt* 13 (Br); *Sapin* s.n. [Juillet 1906] (Br), s.n. [Decembre 1909] (Br), s.n. [Juillet 1910] (Br), s.n. (Br, Br, N); *Scaetta* 720 (Br), 753 (Br, Br), 784 (Br), 858 (Br); *Seret* 460 (Br, N), 858bis (Br); *Troupin* 5524 (N), 6299 (W--2375337); *Ueentel* s.n. [Iboko, juin 1900] (Br); *Vanderyst* 574 (Br), 5465 (Br), 9943 (Br), 9947 (Br), 14887 (Br, Br), 15114 (Br, Br), 19100 (Br), 19139 in part (Br), 21012 (Br, N), 21015 (Br), s.n. [Octobre 1911] (Br), s.n. [Envir. Kisantu] (Br); *Vanderyst & Lambrette* 5420 (Br). BURUNDI: *Lewalle* 3776 (Ac). UGANDA: *Rogers & Gardner* 319 (Br, Ld--photo, N--photo). ANGOLA: *Lunda: Gossweiler* 14040 (B, Ul, W--2074409). CULTIVATED: Zaire: *Callens* 4155 (Ld).

CLERODENDRUM FUSCUM var. *ATTENUATUM* Mold., *Phytologia* 4: 176. 1953.

Bibliography: Mold., *Biol. Abstr.* 27: 1887 & 2026. 1953; Mold., *Phytologia* 4: 176. 1953; *Hauman, Assoc. Etud. Tax. Fl. Afr. Trop.* Ind. 1954; Mold., *Résumé* 141 & 449. 1959; Mold., *Fifth Summ.* 1: 228 (1971) and 2: 865. 1971; Mold., *Phytol. Mem.* 2: 218 & 537. 1980.

This variety differs from the typical form of the species in having its calyx during anthesis 2.3--3 cm. long, split almost to the base, the lobes ovate and apically long-attenuate into a filiform-subulate tip.

The variety is based on *Corbisier-Baland* 1609 from Eala, Zaire, collected on July 7, 1932, and deposited in the Brussels herbarium.

Louis describes the plant as follows: "liane ligneuse de 3 m. de

haut (en pleine forêt primitive); ramisculs velus-violet; pétioles articulés; grand calice blanc vaguement teinté de vert, pétales coudés formant 5 poches à la base, puis dressés et convergents en pyramide; corolla bilabée 2/3, de même couleur que le calice avec belle tache rouge sombre (51 Ségué) à la base de la lèvre inférieure; filets vert pâle courbes, anthères vert sombre; graines d'un noir intense à arille adaxiale, basilaire, oblongue, profondément ruminée, orange vif (plus vif que le 196 de Ségué), entourées du calice persistant rose-violacé."

Lebrun refers to the "flowers" as "white, with a large purple blotch at the base of the principal segment" (no. 6635) or "calyx yellowish-white, corolla yellow, the petals spotted or streaked with purple at the base (no. 691). He describes the plant as an "arbuste lianiforme". Corbisier-Baland refers to it as an "arbuste sarmenteux décoratif". The calyx is also described by others as "rose" and the fruit as black.

Collectors have encountered this plant in secondary and swampy forests, at 470 m. altitude, in flower in January, May to August, and November, and in fruit in January and September. The only vernacular name reported for it is "mbambake e boliki".

The *Bequaert 2031*, cited below, is one of the cotype collections cited by DeWildeman (1920) in his description of *C. macrocalyx* De Wild., so in designating a lectotype for the latter, this collection should be excluded from consideration.

The *Leemans 194*, also cited below, is a mixture with *C. umbellatum* var. *asperifolium* (Thomas) Mold.

Citations: ZAIRE: *Bequaert 2031* (Br, Ld--photo, N, N--photo); *Claessens 15* (Br); *Corbisier-Baland 1609* (Br--type, Br--isotype, Ld--photo of type, N--photo of type); *Goossens 2609* (Br), 2659 (Br), 2764 (Br), 6016 (Br, Br), 6115 (Br, N), 6176 (Br); *Huyghe s.n.* [1907] (Br); *M. Laurent 1955* (Br); *Lebrun 691* (Br), 1357 (Br, Br, N), 6635 (Br, Br, N); *Leemans 194* in part (Br), 262 in part (Br, Br); *Louis 7582* (Br); *Pynaert 241* (Br, N), 292 (Br). CULTIVATED: Zaire: *Corbisier-Baland 4285* (Br).

CLERODENDRUM FUSCUM var. *LANCEOLATUM* Mold., *Phytologia* 4: 176. 1953.

Bibliography: Mold., *Riol. Abstr.* 27: 1887 & 2026. 1953; Mold., *Phytologia* 4: 176. 1953; Mold., *Résumé* 141 & 449. 1959; Mold., *Fifth Summ.* 1: 228 (1971) and 2: 865. 1971; Mold., *Phytol. Mem.* 2: 218 & 537. 1980.

This variety differs from the typical form of the species in having its leaf-blades regularly lanceolate, 5--7 cm. long, and 1.6--3.2 cm. wide.

It is based on *Dewulf 755* from a savanna at Bas Uele, Zaire, collected on March 10, 1935, and deposited in the Brussels herbarium. Thus far it is known to me only from the original collection.

Citations: ZAIRE: *Dewulf 755* (Br--type, Ld--photo of type, N--photo of type).

CLERODENDRUM GALEATUM Balf. f., *Proc. Roy. Soc. Edinb.* 12: 91 [as "*Clerodendron*"]. 1884; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 1, 53 & 90. 1942.

Synonymy: *Clerodendron* (*Cyclonema*) *galeatum* Balf. f., Proc. Roy. Soc. Edinb. 12: 91. 1884. *Clerodendron galeatum* Balf., Trans. Roy. Soc. Edinb. 31: 235. 1888.

Bibliography: Balf. f., Proc. Roy. Soc. Edinb. 12: 91. 1884; Balf. f., Trans. Roy. Soc. Edinb. 31: [Bot. Socotra] 235--236, pl. 80. 1888; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 561. 1893; Stapf, Ind. Lond. 2: 238. 1930; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 53 & 90. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 561. 1946; Mold., Alph. List Cit. 1: 27. 1946; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 124 & 181. 1949; Mold., Résumé 158 & 449. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 561. 1960; Mold., Fifth Summ. 1: 265 (1971) and 2: 865. 1971; Mold., Phytol. Mem. 2: 253, 386, & 537. 1980.

Illustrations: Balf. f., Trans. Roy. Soc. Edinb. 31: pl. 80. 1888.

A shrub, tomentose-pubescent throughout and fuscous; branches angular; leaves decussate-opposite, petiolate; leaf-blades broadly elliptic or oblong, rarely subobovate, 5--8.75 cm. long, 2.5--5 cm. wide, apically obtuse or broadly acute (rarely emarginate), marginally obscurely crenate and broadly revolute, basally narrowed, lighter and rather more densely pubescent-tomentose beneath; inflorescence terminal, erect, rigid; peduncles 2.5--5 cm. long; primary rachis regularly and racemosely branched, 1 or 2 times dichotomous, the inflorescence-branches ascending; bracts large, foliaceous, sessile, semiamplexicaul, ovate or elliptic to subrotund; bractlets spatulate or lanceolate, stipitate; pedicels 6 mm. long; calyx 4 mm. long, 5-lobed to about 1/3 its length, the lobes rounded, externally shortly pilose; corolla-tube 6 mm. long, internally glabrous, the posterior lobe cucullate-hooded and 1.2 cm. long, the others subequal, elliptic, apically obtuse, externally strigulate, marginally ciliate; stamens inserted in the throat of the corolla; filaments thickened for the basal 3 mm., straight and villous, filiform and strigulose above; anthers oblong; fruit drupaceous, 4-lobed, the endocarp crustaceous, smooth.

This endemic species, obviously belonging to the subgenus *Cyclonema*, is based on *Balfour 441* from the Haghier hills behind Tamarida, Socotra. Balfour (1888) refers to it as "An interesting species having its nearest allies in *C. myricoides*, and *C. pilosus*, Benth. and Hook. (Gen. Pl. ii. 1156), and a few other African species ranging from Abyssinia to the Cape, all characterised by the production of the posterior lobe of the corolla into a large helmet-like hood. Upon this character Hochstetter (in Flora 1842, 225) founded the genus *Cyclonema*, but Bentham and Hooker have reduced this to *Clerodendron*, as the hooding is more or less apparent in many other species of the genus. The inflorescence of our species is a very marked feature with its large bracts, and this with the characters of the foliage easily separate it from related species." A local vernacular name for the plant is "duuha". The species is known to me thus far only from the type collection.

Citations: SOCOTRA: *Balfour 441* (L--isotype). MOUNTED ILLUSTRATIONS: Balf. f., Trans. Roy. Soc. Edinb. 31: pl. 80. 1888 (Ld).

CLERODENDRUM GARRETTIANUM Craib, Kew Bull. Misc. Inf. 1911: 444 [as "*Clerodendron*"]. 1911; H. Hallier, Meded. Rijks Herb. Leid. 37: 75. 1918.

Synonymy: *Clerodendron garrettianum* Craib, Kew Bull. Misc. Inf. 1911: 444. 1911. *Clerodendrum garretianum* Craib ex H. Hallier, Meded. Rijks Herb. Leid. 37: 75 sphalm. 1918. *Clerodendron disparifolium* Bakh. ex Fletcher, Kew Bull. Misc. Inf. 1938: 427 in syn. 1938 [not *Clerodendrum disparifolium* Blume, 1826, nor Hassk., 1921, nor Kochum, 1980]. *Clerodendrum garethianum* Craib ex Mold., Résumé Suppl. 15: 19 in syn. 1967. *Clerodendrum garethianum* Craib ex Mold., Fifth Summ. 1: 462 sphalm. in syn. 1971.

Bibliography: Craib, Kew Bull. Misc. Inf. 1911: 444. 1911; Craib, Contrib. Fl. Siam Dicot. 165. 1912; Fedde & Schust., Justs Bot. Jahresber. 39 (2): 319. 1913; H. Hallier, Meded. Rijks Herb. Leid. 37: 75. 1918; Dop in Lecomte, Notul. Syst. 4: 11. 1920; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 84, 109, & viii. 1921; Prain, Ind. Kew. Suppl. 5, imp. 1, 61. 1921; Dop in Lecomte, Fl. Gen. Indo-chine 4: 851 & 868. 1935; Fletcher, Kew Bull. Misc. Inf. 1938: 405, 407, 424, & 427. 1938; Mold., Alph. List Inv. Names 17. 1942; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 60 & 90. 1942; H. N. & A. L. Mold., Pl. Life 2: 60. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 137 & 181. 1949; Anon., Kew Bull. Gen. Ind. 77. 1959; Mold., Résumé 177, 262, & 449. 1959; Prain, Ind. Kew. Suppl. 5, imp. 2, 61. 1960; Mold., Dansk Bot. Arkiv 23: 89. 1963; Mold., Résumé Suppl. 15: 18 & 19. 1967; Mold., Fifth Summ. 1: 295, 443, 445, & 462 (1971) and 2: 865. 1971; Mold., Phytol. Mem. 2: 284 & 537. 1980; Mold., Phytologia 58: 404 (1985) and 59: 325, 330, & 409. 1986.

A branched shrub, 0.5--1.2 m. tall; branchlets slender, at first puberulent, later glabrous; bark brown or red-brown; leaves decussate-opposite, somewhat unequal; petioles somewhat unequal, 0.5--5 cm. long, canaliculate above, puberulent; leaf-blades thinly chartaceous, oblong or oblong-lanceolate, 5.5--19 cm. long, 1.5--5.8 cm. wide, apically acuminate (the acumen acute), marginally subentire and ciliolate, basally mostly very broadly cuneate but sometimes cuneate, cuneate-rotund, or subcordate-truncate, very sparsely setulose or short-pubescent above, puberulent on the midrib and secondaries beneath; secondaries 7--9 per side, the 2 basal ones mostly very oblique, conspicuous above, prominulent beneath; tertiaries transverse, conspicuous above, prominulent beneath; inflorescence terminal, paniculate, subnutant, about 5 cm. long and 6 cm. wide, leafy, the lower cymes axillary; peduncles 2--3 cm. long; lowest bracts lanceolate, to 1.3 cm. long, foliaceous, apically acuminate; pedicels to 8 mm. long, puberulent; calyx externally puberulent, its tube scarcely 2 mm. long, the lobes lanceolate, about 5 mm. long and 1.5 mm. wide, apically acute, ventrally pubescent; corolla white or greenish-white to pale-yellow, externally puberulent, its tube 2--2.5 cm. long, scarcely 1 mm. wide, the lobes subequal, oblong-spatulate, to 1 cm. long and 2.75 mm. wide, ciliolate; stamens inserted near the apex of the corolla-tube; filaments 1.7 cm. long, glabrous; anthers oblong, 1.5 mm. long; style slender, 3.2 cm. long, glabrous; stigma shortly bifid; ovary externally glabrous.

This species is based on *Kerr 1309 & 1435* from evergreen jungles, at 690--900 m. altitude, Chiangmai, on Doi Sootep, Thailand.

Collectors have found this plant growing in thickets, on mountain-sides, in the crevices of limestone rock, and especially in light evergreen forests and jungles, at 25--1200 m. altitude, in flower in June and September. Smitinand refers to it as "scattered in evergreen jungles" in Thailand.

The corollas are said to have been "white" on *Smitinand 1722*, "greenish-white" on *Kerr 1309 & 1435*, and "pale-yellow" on *Iwatsuki & al. T.10976*.

According to Bakhuizen (1921), who identified it as *C. disparifolium* Blume in 1920 and as *C. deflexum* Wall. in 1924, the species greatly resembles these two species, but differs in that its leaves are much smaller, thinner, and less pubescent. It may prove to be only a variety of the latter taxon.

It may be noted here that the *C. disparifolium* of Blume, referred to in the synonymy (above) is a valid species with *C. disparifolium* Kochum as a synonym, while the *C. disparifolium* credited to Hasskarl is a synonym of *C. laevifolium* Blume.

Fletcher (1938) cites for *C. garrettianum* from Thailand: *Kerr 1309, 1435, 3392, & 9101, Marcan 1073, Put 1143 & 1939, and Winit 780, 1170, 1475, & 1476*.

A key to help distinguish this species from other Indochinese taxa will be found under *C. hahnianum* Dop in the present series of notes.

Citations: THAILAND: *Hansen, Seidenfaden, & Smitinand 11041* (Cp); *Iwatsuki, Fukuoka, Hutch, & Chaiglom T.10976* (Ac); *Kerr 1435* [King photo 293] (Bz--19161--cotype, Ld--photo of cotype, N--photo of cotype, N--photo of cotype, W--photo of cotype); *Smitinand 1722* [Herb. Roy. For. Dept. 9970] (Ld); *Sørensen, Larsen, & Hansen 6857* (Cp).

CLERODENDRUM GAUDICHAUDII Dop in Lecomte, Notul. Syst. 4: 10 [as "*Clerodendron*"]. 1920; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942.

Synonymy: *Clerodendron gaudichaudii* Dop in Lecomte, Notul. Syst. 4: 10. 1920.

Bibliography: Dop in Lecomte, Notul. Syst. 4: 10. 1920; A. W. Hill, Ind. Kew. Suppl. 6: 49. 1926; Fedde & Schust., Justs Bot. Jahresber. 48 (1): 497. 1927; Dop in Lecomte, Fl. Gén. Indo-chine 4: 852 & 873. 1935; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942; H. N. & A. L. Mold., Pl. Life 2: 60. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 136 & 181. 1949; Mold., Résumé 175 & 449. 1959; Mold., Fifth Summ. 1: 299 (1971) and 2: 865. 1971; Mold., Phytologia 31: 395. 1975; L. H. & E. Z. Bailey, Hortus Third 285. 1976; Mold., Phytol. Mem. 2: 291, 349, 386, & 537. 1980.

A small tree, 5--6 m. tall; branches terete, glabrous; bark reddish-brown, shiny, wrinkled; leaves variable; petioles 2--3 cm. long, glabrous; leaf-blades membranous, obovate or obovate-elliptic to elliptic or oblong, 12--20 cm. long, 3.5--6 cm. wide, apically acute or acuminate to obtuse, marginally entire or coarsely and irregularly dentate or denticulate, basally rounded or sometimes obtuse, glabrous and shiny on both surfaces; midrib rounded, prominent; sec-

ondaries 12--14, recurved-ascending; veinlet reticulation distinct, irregular; inflorescence terminal or subterminal, to 10 cm. long and 4 cm. wide, glabrous; peduncles 2 cm. long; inflorescence ramifications distant, branched; cymes 3-flowered; bracts and bractlets linear, very small; pedicels 4--5 mm. long; calyx campanulate, yellow during anthesis, 12 mm. long, basally 10 mm. wide, externally glabrous, the tube practically obsolete, the lobes oval-lanceolate, 11.5 mm. long, 4 mm. wide, apically acute, distinctly venose, marginally scarious; corolla yellow, glabrous, the tube cylindric, 12 mm. long, the lobes spatulate, 5 mm. long, apically rounded; stamens somewhat exserted; style slender; stigma shortly bifid; ovary externally glabrous; fruiting-calyx accrescent, reddish, 2.5 cm. long, wide-spreading; fruit drupaceous, 1 cm. long, black, shiny, composed of 4 pyrenes.

This endemic species is based on *d'Alleizette 480*, *Bauche 36*, and *Gaudichaud 135* from Hue and Tourane, Annam, and *Bon 5466* from Son-Thon, Tonkin, Vietnam. Dop (1935) adds unnumbered Chevalier and Squires collections from Annam. Dop (1920) notes that "Cette espèce est voisine du *Cl. Robinsonii*; elle s'en éloigne par le port, les feuilles et le calice qui ne devient rouge que dans le fruit."

Clerodendrum gaudichaudii has been found growing at 1000 m. altitude. The Baileys (1976) list it as cultivated in the United States. A key to help distinguish it from other Indochinese taxa will be found under *C. hahnianum* Dop in the present series of notes.

As yet nothing is known to me of this species beyond what is given in its bibliography (above).

CLERODENDRUM GEOFFRAYI Dop in Lecomte, Notul. Syst. 4: 8 [as "*Clerodendron*"]. 1920; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942.

Synonymy: *Clerodendron geoffrayi* Dop in Lecomte, Notul. Syst. 4: 8. 1920.

Bibliography: Dop in Lecomte, Notul. Syst. 4: 8. 1920; A. W. Hill, Ind. Kew. Suppl. 6: 49. 1926; Fedde & Schust., Justs Bot. Jahresber. 48 (1): 497. 1927; Dop in Lecomte, Fl. Gén. Indo-chine 4: 853 & 881--882. 1935; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942; H. N. & A. L. Mold., Pl. Life 2: 60. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 136 & 181. 1949; Mold., Résumé 175 & 449. 1959; Mold., Fifth Summ. 1: 299 (1971) and 2: 866. 1971; Mold., Phytologia 31: 395. 1975; Mold., Phytol. Mem. 2: 288, 386, & 537. 1980.

A large woody plant; branches pubescent; leaves decussate-opposite; petioles 6 cm. long, pubescent; leaf-blades membranous, elliptic-oblong, 25 cm. long, basally 9.5 cm. wide, 12 cm. wide at the mid-point, apically abruptly acuminate, marginally subentire and ciliate, basally truncate and subhastate with 2 rounded lobes, glabrous above, pubescent on the venation beneath; midrib rounded, very prominent; secondaries 18, alternate, slender, somewhat recurved, marginally anastomosing in intramarginal arcs, the 2 lowermost opposite and bifurcate 1 cm. from the base; veinlets parallel, with distinct reticulation; inflorescence terminal, paniculate, pendent, 27 cm. long, 13 cm. wide, finely pubescent, the ramifications branched,

trichotomous, the cymes 7-flowered; bracts and bractlets very small; pedicels 1--2 cm. long; calyx campanulate, red, 10 mm. long, the tube 4 mm. long, the lobes ovate, 6 mm. long, apically acute, 1-veined; corolla white, puberulent, the tube 13 mm. long, the lobes spatulate, 10 mm. long, apically obtuse; stamens long-exserted; filaments glabrous; anthers oblong; style slender; stigma shortly bifid; ovary externally glabrous; fruit unknown.

This little-known apparently endemic species is based on an unnumbered Geoffray collection from Kep, Cambodia, where the plant is said to be "rare sous bois". Dop (1938) comments that "Une seule feuille a put être examinée; cette espèce se rapproche du *C. hastato-oblongum* C. B. Clarke, insuffisamment décrit par l'auteur."

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

CLERODENDRUM GIBBOSUM Mold., Amer. Journ. Bot. 38: 323--324. 1951.

Bibliography: Mold., Amer. Journ. Bot. 38: 323--324. 1951; Mold. in Humbert, Fl. Madag. 174: 152, 209--211, & 267, fig. 34 (1 & 2). 1956; Mold., Résumé 155 & 449. 1959; G. Taylor, Ind. Kew. Suppl. 12: 36. 1959; Mold., Fifth Summ. 1: 260 (1971) and 2: 866. 1971; Mold., Phytol. Mem. 2: 249 & 537. 1980; Mold., Phytologia 58: 188. 1985.

Illustrations: Mold. in Humbert, Fl. Madag. 174: 211, fig. 34 (1 & 2. 1956.

A shrub, to 2 m. tall; branchlets and twigs slender, gray, obtusely tetragonal or subterete, glabrous or the youngest parts obscurely puberulous, mostly prominently lenticellate, the youngest parts often somewhat flattened and canaliculate (and then puberulous in the channel); nodes not annulate; principal internodes 1.5--5 cm. long; leaves decussate-opposite; petioles rather slender, 4--8 mm. long, glabrous; leaf-blades chartaceous, quite firm, uniformly bright-green on both surfaces, sometimes brunnescient in drying, elliptic, 3--8.5 cm. long, 1.4--3.3 cm. wide, apically acute or (mostly) acuminate, marginally entire, basally acute or acuminate, glabrous and lustrous on both surfaces; midrib slender, flat or slightly subimpressed above, prominent beneath; secondaries very slender, 6--9 per side, divergent, arcuately joined several mm. from the margins beneath, prominent or subimpressed above, very sharply prominent beneath; vein and veinlet reticulation very abundant, fine, prominent on both surfaces; inflorescence axillary and terminal, mostly at the tips of the twigs, cymose; cymes 6--9 cm. long, 1.5--4 cm. wide, mostly simple or once dichotomous, 3- or 7-flowered, very loose; peduncles filiform, 1--5.5 cm. long, often flattened, stramineous or brownish, more or less spreading-puberulent or glabrescent; cyme-branches similar to the peduncle in all respects but shorter; pedicels filiform, 3--11 mm. long, minutely puberulent with widely scattered hairs or glabrate; foliaceous bracts apparently absent; bractlets and prophylla linear-setaceous, 1--2 mm. long; calyx thinly membranous, urceolate, gibbous-inflated, ovate, 8--15 mm. long, 7--11 mm. wide, glabrous or practically so, its rim 5-lobed, the lobes ovate, about 2 mm. long, apically acute or apiculate; corolla hypocrateriform, zygomorphic, white, its tube cylindric, about 2 cm. long, externally glabrous or slightly pilosulous

on the lower $\frac{1}{4}$ and within, the limb 5-parted, about 1.5--2 cm. wide; stamens 4, inserted about 1 cm. from the base of the corolla-tube, exerted about 1 cm. from its mouth; filaments glabrous, 1.5--2 cm. long; anthers dorsifixed, 2-celled; disk small, beneath the ovary; ovary globose, externally glabrous; style about 3 cm. long, arched, glabrous, narrowed from the base to the apex, slightly narrower at the point of insertion; stigma 2-toothed; ovary 2-celled, with 2 ovules in each cell.

This endemic species is based on *Boivin 1800* from the edge of the sea near Sainte Marie, Madagascar, collected in September, 1888, and deposited in the Paris herbarium. Other collectors have encountered this plant growing among gneiss rocks, in flower in August and September.

A key to help distinguish this species from its Madagascar relatives will be found under *C. baronianum* Oliv. in the present series of notes (58: 184--190).

Citations: MADAGASCAR: *Boivin 1800* (E--photo of type, F--photo of type, Ld--photo of type, N--fragment of type, N--photo of type, P--type); *Decary 604* (P), *4614* (P), *4719* (P).

CLERODENDRUM GLABRATUM Gürke, Engl. Bot. Jahrb. 28: 295 [as "*Clerodendron*"]. 1900; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. *Clerod.*] 43, 77, & 93. 1936.

Synonymy: *Clerodendron glabratum* Gürke, Engl. Bot. Jahrb. 28: 295. 1900.

Bibliography: J. G. Baker in Thiselt.-Dyer, Fl. Trop. Afr. 5: 516--517. 1900; Gürke, Engl. Bot. Jahrb. 28: 295. 1900; K. Schum., Justs Bot. Jahresber. 28 (1): 495. 1900; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 43. 1904; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. *Clerod.*] 43, 77, & 93. 1936; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 49 & 90 (1942) and ed. 2, 116 & 181. 1949; Mold., Résumé 144 & 450. 1959; Mold., Résumé Suppl. 9: 3. 1961; Mold., Fifth Summ. 1: 235 & 445 (1971) and 2: 866. 1971; Mold., Phytol. Mem. 2: 225 & 537. 1980.

A shrub; branches glabrous, with small petiolar spurs after the leaves have fallen, with a small supplementary bud plainly visible; leaves decussate-opposite; petioles 1--2 cm. long, glabrous; leaf-blades chartaceous or papyraceous, ovate-elliptic, 5--10 cm. long, 2.5--4.5 cm. wide, mostly about twice as long as wide, apically acuminate, marginally entire, basally plainly long-attenuate into the petiole, glabrous and shiny on both surfaces; inflorescence loosely pseudo-umbellate, the cymes very many-flowered, the ramifications glabrous or here and there finely downy; peduncles to 4 cm. long; bracts and bractlets narrow-lanceolate or awl-shaped, sessile, 2--4 mm. long, finely downy; calyx campanulate, about 3 mm. long, basally narrowed into the pedicel, 5-toothed to about $\frac{1}{3}$ the length, externally finely downy, the teeth narrowly triangular or deltoid, about 1 mm. long, apically acuminate, basally 0.5 mm. wide; corolla-tube 6--8 mm. long, 1 mm. wide, the lobes broadly elliptic, about 3 mm. long and 2.5 mm. wide, apically obtuse.

This species is based on *Stuhlmann 7996* from Kondutschi, Tanganyika, Tanzania, collected in flower on May 9, 1894, and deposited in the Berlin herbarium, now destroyed. Baker (1900) cites only the

type collection, but Thomas (1936) adds *Braun 3648* from Tanganyika.

Gürke (1900) comments that "Habituell hat die Pflanze Ähnlichkeit mit *Cl. toxicarium* Baker, in dessen Nähe sie auch zu stellen ist. Diese Art hat jedoch behaarte Blätter und etwas grössere Kelche, deren Zähne breiter und nicht so lang zugespitzt sind."

The *E. Wall 54*, distributed as *C. glabratum*, actually is *C. glabrum* E. Mey., while *Peter 24343* is *C. incisum* Klotzsch.

Nothing further is known to me of *C. glabratum* beyond what is stated in its bibliography (above).

CLERODENDRUM GLABRUM E. Mey., *Comm. Pl. Afr. Austr.* 273 [as "*Clerodendron*"]. 1838; Steud., *Nom. Bot. Phan.*, ed. 2, 1: 383. 1840.

Synonymy: *Clerodendrum capense* Donn. ex Steud., *Nom. Bot. Phan.*, ed. 1, 207 nom. nud. 1821. *Clerodendron glabrum* E. Mey., *Comm. Pl. Afr. Austr.* 273. 1838. *Clerodendrum capense* Don ex Steud., *Nom. Bot. Phan.*, ed. 2, 1: 382. 1840. *Ehretia triphylla* Hochst., *Flora* 27: 830. 1844. *Amerina triphylla* (Hochst.) A. DC., *Prodr.* 9: 513. 1845. *Clerodendron capense* Eckl. & Zeyh. ex Schau. in A. DC., *Prodr.* 11: 661 in syn. 1847 [not *C. capense* Walther, 1947]. *Clerodendron glabrum* Sond. ex Harv., *Gen. S. Afr. Pl.*, ed. 2, 292. 1868. *Amerina triphylla* DC. apud Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 1, 1: 106. 1893. *Clerodendron capense* D. Don apud Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 1, 1: 560. 1893. *Clerodendron ovale* Baker in Thiselt.-Dyer, *Fl. Trop. Afr.* 5: 298. 1900 [not *C. ovale* Klotzsch, 1862]. *Siphonanthus glabra* (E. Mey.) Hiern, *Cat. Afr. Pl. Coll. Welw.* 1: 842. 1900. *Siphonanthus glabra* Hiern apud Thiselt.-Dyer, *Ind. Kew. Suppl.* 2: 172. 1904. *Clerodendrum capense* Ecklon & Zeyher apud B. Thomas, *Engl. Bot. Jahrb.* 68: [Gatt. *Clerod.*] 76 in syn. 1936. *Amerina triphylla* Schau. ex Mold., *Alph. List Inv. Names* 4 in syn. 1942. *Clerodendron capense* Don ex Mold., *Alph. List Inv. Names* 16 in syn. 1942. *Clerodendron ovale* Kunth ex Mold., *Alph. List Inv. Names Suppl.* 1: 6 in syn. 1947. *Clerodendron glabrum* var. *capense* Ecklon & Zeyher ex Mold., *Résumé* 263 in syn. 1959. *Clerodendrom glabrum* E. Mey. ex Menninger, 1960 *Price List Flow. Trees* [3] sphalm. 1960. *Amerina triphylla* A. DC. apud Palmer & Pitman, *Trees South. Afr.* 3: 1963 in syn. 1972.

Bibliography: Steud., *Nom. Bot. Phan.*, ed. 1, 207. 1821; E. Mey., *Comm. Pl. Afr. Austr.* 273. 1838; Harv., *Gen. S. Afr. Pl.*, ed. 1, 269. 1838; Steud., *Nom. Bot. Phan.*, ed. 2, 1: 382 & 383. 1840; Hochst., *Flora* 27: 830. 1844; A. DC., *Prodr.* 9: 513. 1845; Walp., *Repert. Bot. Syst.* 4: 110--111 & 114. 1845; Schau. in A. DC., *Prodr.* 11: 661. 1847; Buek, *Gen. Spec. Syn. Candoll.* 3: 19, 105, & 106. 1858; Klotzsch in Peters, *Naturwiss. Reise Mossamb.* 6 [Bot.] 1: 257. 1861; Harv., *Gen. S. Afr. Pl.*, ed. 2, 292. 1868; Schinz, *Verhandl. Bot. Ver. Brandenb.* 31: 206. 1890; Gürke, *Engl. Bot. Jahrb.* 18: 179. 1893; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 1, 1: 106, 560, & 561. 1893; Sims, *Sketch Check-list Fl. Kaffr.* 63. 1894; Briq. in *Engl. & Prantl, Nat. Pflanzenfam.*, ed. 1, 4 (3a): 175. 1893; Wood & Evans, *Natal Pl.* 1 (1): pl. 45. 1898; J. G. Baker in Thiselt.-Dyer, *Fl. Trop. Afr.* 5: 293, 297, 297, & 515. 1900; Hiern, *Cat. Afr. Pl. Coll. Welw.* 1: 842. 1900; H. H. W. Pearson in Thiselt.-Dyer, *Fl. Cap.* 5: 218--220 & 225. 1901; Thiselt.-Dyer, *Ind. Kew. Suppl.* 2: 172.

1904; Sim, For. Fl. Cape Colony 236, pl. 120, fig. 2. 1907; Sim, For. Fl. Portug. E. Afr. pl. 98. 1909; N. L. Britton, Fl. Bermuda 318. 1918; R. N. Parker, For. Fl. Punjab, ed. 1, 403. 1918; DeWild., Pl. Bequaert. 2: 264. 1922; R. N. Parker, For. Fl. Punjab, ed. 2, 403. 1924; Galpin, Bot. Surv. S. Afr. Mem. 7: 13. 1925; Good & Exell, Journ. Bot. Brit. 68, Suppl. 2: 140. 1930; Stapf, Ind. Lond. 2: 238. 1930; Watt & Breyer-Brandwijk, Med. Poison. Pl. Southeast. Afr., ed. 1, 154--155 & 230. 1932; Smuts, Kew Bull. Misc. Inf. 1933: 418. 1933; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 11, 25, 43, 76, & 93. 1936; Mold., Alph. List Comm. Vern. Names 23. 1939; Mold., Geogr. Distrib. Avicenn 3, 15, & 37. 1939; Mold., Prelim. Alph. List Inv. Names 5, 19, 21, 23, 25, & 40. 1940; L. H. & E. Z. Bailey, Hortus Second, imp. 1, 188. 1941; Mold., Suppl. List Comm. Vern. Names 5. 1941; Mold., Alph. List Inv. Names 2, 4, 16, 17, 19, 21, 24, & 40. 1942; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 5, 19, 45--52, 72, & 90. 1942; Mold., Phytologia 2: 49. 1945; J. Hutchins., Botanist South. Afr. 363. 1946; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 106, 560, & 561. 1946; Mold., Alph. List Cit. 1: 23, 54, 72, 81, 137, 165, 174, 176, 206, 220, 234, 237, 275, & 297. 1946; Mold., Alph. List Inv. Names Suppl. 1: 6 & 7. 1947; Mold., Alph. List Cit. 2: 327, 407, 422, 429, 449, 620, 628, & 641. 1948; Neal, Gard. Hawaii, ed. 1, imp. 1, 644 (1948) and ed. 1, imp. 2, 644. 1949; L. H. Bailey, Man. Cult. Pl., ed. 2, 845 & 1051. 1949; Mold., Alph. List Cit. 3: 718, 748, 761, 762, 849, 902, & 942 (1949) and 4: 996, 1040, 1104, 1140, & 1193. 1949; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 9, 35, 116--121, 158, & 181. 1949; R. O. Williams, Useful Ornam. Pl. Zanzib. 61, 198, & 358. 1949; Mold., Phytologia 4: 45. 1952; Wild, Rhodes. Agric. Journ. 49: 289. 1952; Wild, Veg. South. Rhodes. Term. 11. 1952; Wild, Vict. Falls Handb. 158. 1953; Mold., Journ. Calif. Hort. Soc. 15: 87. 1954; Parady, Rhodes. Agric. Journ. 52: 414. 1955; Wild, Rhodes. Agric. Journ. 52: 538. 1955; Wild, Observ. Veg. Sabi 8. 1955; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Ind. 1955: 63. 1956; R. N. Parker, For. Fl. Punjab, ed. 3, 577. 1956; Syngé in Chittenden, Roy. Hort. Soc. Dict. Hort., ed. 2, 1: 504 & 505. 1956; Coates & Palgrave, Trees Cent. Afr. 427--[429]. 1957; Menninger, 1959 Price List [2]. 1958; Killick, Bot. Surv. S. Afr. 32: 50, 70, & 112. 1959; Mold., Résumé 12, 41, 49, 141, 144--146, 148--150, 152, 153, 161, 216, 234, 261--268, 272, 273, 284, 344, 426, & 450. 1959; Mold., Résumé Suppl. 1: 9 & 10. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 106, 560, & 561. 1960; Martin & Noel, Fl. Albany Bathhurst 92. 1960; Menninger, 1960 Price List Flow. Trees [3]. 1960; Mold., Résumé Suppl. 2: 8. 1960; Dale & Greenway, Kenya Trees 582 & 584. 1961; Hansford, Sydowia Ann. Myc., ser. 2, Beih. 2: 694. 1961; Menninger, Flow. Trees World 283. 1962; Mold., Résumé Suppl. 3: 28. 1962; Watt & Breyer-Brandwijk, Med. Poison. Pl. S. East. Afr., ed. 2, 517 & 1047--1048. 1962; F. White, For. Fl. North. Rhodes. 365 & 367. 1963; Huber in Hutchins. & Dalz., Fl. W. Trop. Afr., ed. 2, 441 & 444--445. 1963; Mold., Résumé Suppl. 9: 3. 1964; Neal, Gard. Hawaii, ed. 2, 731. 1965; F. White, Webbia 19: 674. 1965; Mold., Résumé Suppl. 12: 6 (1965) and 13: 4. 1966; R. H. Compton, Journ. S. Afr. Bot. Suppl. 6: 66; C. A. Sm., Comm. Names S. Afr. Pl. 106, 439, 469, 498,

& 600. 1966; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. 1966: 56. 1967; Friedrich-Holzhammer in Merxmüller, Prodr. Fl. Südw. Afr. 13 (122): 5. 1967; Mold., Résumé Suppl. 15: 8, 14, & 18. 1967; Moll, For. Trees Natal 139. 1967; J. M. Watt, Lloydia 30: 2 & 4. 1967; Mold., Résumé Suppl. 16: 8. 1968; Moll, Journ. S. Afr. Bot. 34: 75. 1968; Uphof, Dict. Econ. Pl., ed. 2, 137. 1968; Wild, Kirkia 7: 29 & 53. 1968; Gledhill, East. Cape Veld Fls. 201, fig. 2. 1969; Richards & Morony, Check List Fl. Mbala 237. 1969; Van der Schijff, Check List Vasc. Pl. Kruger Natl. Park 81. 1969; Farnsworth, Pharmacog. Titles 5 (11): v & title 15121. 1970; Fosberg, Atoll Res. Bull. 136: 109. 1970; Fosberg & Renvoize, Atoll. Res. Bull. 136: 64 & 152. 1970; Gillett, Numb. Check-list Trees Kenya 46. 1970; Stoddart, Benson, & Peake, Atoll. Res. Bull. 136: 127. 1970; Farnsworth, Pharmacog. Titles 5, Cumul. Gen. Ind. 1971; Long & Lakela, Fl. Trop. Fla. 738 & 935. 1971; Mold., Fifth Summ. 1: 28, 79, 92, 228, 235, 239, 240, 242, 247, 249, 251, 253--256, 258, 272, 358, 389, 438, 441, 444--446, 452, 454, 461, & 465 (1971) and 2: 491, 622, 866, & 970. 1971; Renvoize, Phil. Trans. Roy. Soc. B.260: 230. 1971; Palmer & Pitman, Trees South. Afr., ed. 2, 3: 1963--1965 & 1967. 1972; Venter, Journ. S. Afr. Bot. 38: 231. 1972; Altschul, Drugs Foods 248. 1973; Jacobsen, Kirkia 9: 172. 1973; L. H. & E. Z. Bailey, Hortus Second, imp. 18, 188. 1974; Gibbs, Chemotax. Flow. Pl. 3: 1753 & 1754 (1974) and 4: 2080. 1974; Mold., Phytologia 28: 442 & 448 (1974) and 31: 389 & 391. 1975; Renvoize, Kew Bull. 30: 151. 1975; L. H. & E. Z. Bailey, Hortus Third 285--286. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, 738 & 935. 1976; Mold., Phytologia 34: 261, 268, & 273. 1976; Venter, Journ. S. Afr. Bot. 42: 216 & 230. 1976; Mold., Phytologia 36: 39. 1977; Fosberg, Kew Bull. 33: 143--144. 1978; Isaacson, Flow. Pl. Ind. 1: 335. 1979; Fosberg & Renvoize, Kew Bull. Addit. Ser. 7: [Fl. Aldabra] 220--222, fig. 35 (3 & 4). 1980; J. T. & R. Kartesz, Syn. Checklist Vasc. Fl. 2: 466. 1980; Mold., Phytol. Mem. 2: 21, 71, 85, 218, 225, 228--230, 232, 237, 238, 240, 242, 243, 245, 247, 259, 341, 349, 373, 386, 388, 391, 392, & 537. 1980; Mold., Phytologia 50: 251 & 259. 1982; Reis in Lipp, New Pl. Sources Drugs 251. 1982; H. N. & A. L. Mold. in Das-san. & Fosb., Rev. Handb. Fl. Ceyl. 4: 411 & 457--459. 1983; Mold., Phytologia 57: 338 & 458 (1985), 58: 181, 189, & 197 (1985), and 59: 259, 335, 346, 424, & 428. 1986.

Illustrations: Wood & Evans, Natal Pl. 1: pl. 45. 1898; Sim, For. Fl. Cape Colony pl. 120, fig. 2. 1907; Sim, For. Fl. Portug. E. Afr. pl. 98. 1909; Coates & Palgrave, Trees Cent. Afr. 428. 1957; Moll, For. Trees Natal 139. 1967; Gledhill, East. Cape Veld Fls. 201, fig. 2. 1969; Palmer & Pitman, Trees South. Afr. 3: 1964 & 1965. 1972.

A wide-spreading or sprawling, densely leafy, much-branched, deciduous or evergreen bush or half-climbing shrub, or small spreading tree, 1--12 m. tall, growing singly or in groups, the whole plant fetid or "smelling like cooked meat"; trunk single, upright, branched, to 30 cm. in diameter; sap colorless; outer bark grayish-white to brown or yellow-brown, thick or thin, pulverulent, rough, cracked in age; wood white or tinged with red-brown, fairly heavy (weight 43.1 lbs. per cu. ft.), hard (relative hardness 3.0), moderately strong, elastic (elasticity coefficient 331 tons; modulus of

rupture 3.96 tons), dense, close-grained; medullary rays fine, pores small, numerous, distributed irregularly in short radial lines; blaze white, streaked with yellow; crown spreading, leafy, often drooping; stems often numerous, simple or branched; branchlets slender or rather stout, obtusely tetragonal, very conspicuously lenticellate, the bark light-gray, usually glabrous or sometimes obscurely pulverulent when young; nodes indistinctly annulate; principal internodes 2--9.5 cm. long; leaves decussate-opposite, ternate, or quaternate, with an unpleasant feline odor when crushed; petioles slender, 0.9--2.5 cm. long, flattened and strigillose above, glabrous and rounded beneath, borne on a rather conspicuous, corky, and elongated cicatrix; leaf-blades firmly chartaceous or subcoriaceous, somewhat fleshy when fresh, dark-green or yellowish-green and glossy above, much lighter beneath, ovate or elliptic-ovate to oblong, 2.7--14 cm. long, 1.8--7.6 cm. wide, apically acute or acuminate to obtuse, marginally mostly entire or rarely with a few scattered teeth, basally broadly and abruptly acute or short-cuneate, glabrous above except for the midrib, glabrous and densely punctate beneath; inflorescence axillary in the uppermost leaf-axils and terminal, the cymes opposite or whorled, solitary, compound, very densely many-flowered, to 7.5 cm. long and 6 cm. wide, several times bifurcate, puberulent throughout; terminal panicles corymbose or subcorymbose to pyramidal or thyrsoïd, densely congested, composed of 2--7 cymes; peduncles rather slender (or the terminal ones stouter), 1.5--3.5 cm. long, minutely puberulent or subglabrate; pedicels very slender, 2--10 mm. long, puberulent; bractlets and prophylla linear or linear-lanceolate, 2--6 mm. long, glabrous or strigillose; flowers richly fragrant, the perianth pentamerous; calyx campanulate, 2--6 mm. long, externally glabrous or puberulent and with numerous sessile spherical glands, the rim 5-toothed, the teeth short, subulate-triangular or -lanceolate, 1.5--3 mm. long, apically acute; corolla hypocrateriform, white or frequently tinged with pale-pink, the tube straight, 5--12 mm. long, externally finely puberulent and glandulose, the lobes obovate, 3--4 mm. long, subequal, reflexed in age, apically rounded-obtuse, marginally somewhat wavy; stamens 4--6, twice as long as the corolla-lobes; style subulate, long-exserted, partially persistent on the fruit; stigma bifid; ovary oblong, externally glabrous, imperfectly 4-celled and each cell 1-ovulate or 2-celled and each cell 2-ovulate; fruiting-calyx accrescent, 5--7-toothed; fruit drupaceous, small, globose or subglobose, 8--12 mm. long and wide, oblique, shiny, at first green, then white or cream-color to yellowish, black when mature, externally glabrous, centrally mucronate, 4-furrowed, 1--4-seeded, usually easily dividing into two 1-seeded bony pyrenes of which one is often infertile.

This species is based on an unnumbered Drège collection from "ad ripas Basche, alt. 500 ped." in South Africa. It is native to tropical and southern Africa from Tanzania, Kenya, and Angola to Malawi, Mozambique, and South Africa, also in the Comoro and Seychelles Islands; widely cultivated for hedges and for ornament in tropical and subtropical parts of both hemispheres and tending to escape and become naturalized. It is widely utilized as a hedge plant in Sierra

Leone and arrow-shafts are made of its stems. In South Africa a decoction of the leaves, mixed with milk, is used as a purgative and vermifuge for calves. In Tanzania the leaves and twigs are made into a steaming infusion over which fever patients bend or sit. Many African tribes rub the leaves over their hands and face before attempting to take honey from bees' nests to prevent being stung. In Zululand and Zaire the leaves are used to produce a cough and fever remedy and an infusion from the roots is taken orally in cases of snakebite, especially that of the mambas. The Zulu also use the leaf as one of their remedies against internal parasites such as tapeworm and roundworm, while an infusion of the juice of the roots with *Iboza riparia* N. E. Br. is taken as an emetic and expectorant in the treatment of various rheumatic conditions and stomach-ache. The Sotho employ the leaf infusion in cases of colic, while a leaf decoction applied to the wounds is supposed to inhibit the development of blowfly and other maggots in animal wounds. Others place the pounded leaves in the armpits and on the neck of children suffering from convulsions in order to induce them to sleep. An infusion of the root-bark is used as a vermifuge for donkeys and it is believed by some practitioners that the odor of the plant will repel beetles. In the Transvaal the leaves, in solution, are employed as a disinfectant and in the treatment of coughs, colds, and colic. The wood is said to make excellent timber. The Zulus use the wood as tinder for starting fires.

The leaves of this plant are often infested by the fungus, *Meliola clerodendricola* P. Henn., in Sierra Leone (e.g., on Deighton 1225).

Sim describes *Clerodendrum glabrum* as "A small and often bushy evergreen tree, 15 feet in height, 6--12 inches in diameter, with grey bark often damaged by insects.....It occurs in the coast districts [of the Cape] from Port Elizabeth to Natal, also more inland in Transvaal and Tropical Africa."

Galpin (1925) describes the species as a "Tree 15 to 20 feet high; stem about 9 inches in diameter. Only attains arborescent size along the northern borders of the flats in sandy loams, and I have no local information as to its timber value"; Sim asserts that it is "seldom used". Parker (1924) describes the plant as "Indigenous to tropical and South Africa. Occasionally grown in gardens in the plains. This plant has much the appearance of a *Ligustrum*."

Gürke (1893) notes that "Einige Ähnlichkeit, besonders in Bezug auf die Blattform besitzt die vorliegende Art [*C. formicarum*] mit dem in Capland einheimischen *C. glabrum* E. Mey.; doch ist dieser durch die sehr lang zugespitzten Kelchzipfel verschieden."

Palmer & Pitman (1972) tell us that *C. glabrum* "is a distributed species of coastal bush and forest, often on stream banks, of bushveld, and in South West Africa of mopane scrub, extending from the eastern Cape [of Good Hope], through Natal and Zululand -- from the coast to the Frakensberg -- and Swaziland, to the Transvaal, Botswana, and Ovamboland in South West Africa, and northwards to tropical Africa. It is a widespread species in the Transvaal, and about January, when it is usually in bloom, it can be noted along many roads from Pretoria northwards through the Waterberg. It may be a

shrub, a small tree -- on the coastal dunes short and deformed -- or a tree up to 12 m high in forest; either deciduous or evergreen; with a trunk up to about 30 cm in diameter.....This is one of the rain or weeping trees of South Africa. Small insects known as frog-hoppers suck the moisture from the branches and this forms a spittle and later drops of 'water' that fall to the ground below. Two butterflies which are known to breed on the tree are the Purple Brown Hairstreak, *Hypolycaena phillipus* and the Natal Red Bar, *Spindasis natalensis*, which is particularly common along the Natal coast. The former....breeds on the leaves and females may often be seen searching for a suitable plant on which to lay their eggs. The larvae of the Natal Red Bar.....live in tubes in the stalks which are formed by ants eating out the pith, and from these they emerge at night to feed upon the leaves. The verbena tree, in particular the form with sweet-smelling flowers, makes a good garden tree and may be grown from seed or cuttings. It is fast-growing and young trees reproduced from cuttings often flower when 30--90 cm high -- at about one year of age.

Collectors have found *Clerodendrum glabrum* growing in sandy soil as well as in black or rich red-brown loam and even in copper-bearing soil in areas of 500 mm. annual rainfall and in cultivated soil of hedges, often in old degraded areas of native culture, in thickets and secondary growth, in churchyards and bushy sandy places, sandy seaside areas, on maritime dunes and in coastal bush and forest and their margins, on anthills, in coconut plantations, on riverbanks and along streamlets, in light open forests and coppices, in white sandy soil of mopane scrub, in semi-karroid areas, on wooded kloofs, and in closed, dense, high, and xerophilous forests, as well as open, mesic, deciduous forests, from sealevel to 1930 m. altitude, in anthesis in every month of the year, and in fruit in January, March, May, June, August, November, and December.

Hornby refers to the plant as "widely distributed [in Mozambique] along with *Spirostachys*, *Sideroxylon*, *Cussonia* and many other genera", while Balsinhas found it growing on littoral dunes with *Aloë*, *Euphorbia*, *Commiphora neglecta*, *C. schlechteri*, *Bridelia* sp., etc. in the same country, as well as with *Mimusops* sp., *Diospyros rotundifolia*, *Acacia kraussiana*, etc. Bayliss refers to it as "local" in Cape Province, but Gledhill (1969) reports it "common in dune bush and coastal bush of Alexandria and Bathurst divisions and also in Albany. Occurs also in Natal." In Natal it is said by Moll (1967) to occur in "Forest margins and sometimes a canopy tree in disturbed forests". Acocks calls it a "frequent small tree" in Cape Province, while Scheepers refers to it as a "rather infrequent ruderal" in the Transvaal. Hiern (1900) speaks of it as "not uncommon" in Loanda, Angola.

Killick (1959) avers that the plant is only "occasional in forests and in mixed communities around sinks" in South Africa; Smuts (1933) describes it as "very common in sandstone soil" in the Transvaal. Frazier describes it as a "common woody shrub to 2 m. tall inland of coastal sand dunes at the edge of coconut plantations" in Tanzania. On Zanzibar island Faulkner found it "in open bush formation a short distance from the foreshore in white sand". Compton

reports it from the "middle veld" in Swaziland, while Jacobsen (1973) refers to it as "rare in thickets on dolomite outcrops" in Zimbabwe. Stoddart and his associates found it in the sand beach community of mixed native and introduced species on Assumption island. Huber (1963) tells us that it has been introduced in western tropical Africa as a hedge plant. My wife and I have found it in cultivation in Florida, in the Hawaiian Islands, and in Sri Lanka. In the Kruger National Park it is "associated with scrub on the banks of dongas and on anthills" according to Van der Schijff.

Dale & Greenway (1961) aver that the species is found only in the coastal districts of Kenya, citing *Dale* 3571, *Graham* 1954, and *Scott-Elliott* 6103.

A key to help distinguish *C. glabrum* from its non-capitate relatives is given under *C. dusenii* Gürke in the present series of notes (59: 335); another, distinguishing it from other commonly cultivated taxa, is given under *C. bethunianum* Low (58: 195--198), and others under *C. discolor* (Klotzsch) Vatke (59: 259--260) and *C. indicum* (L.) Kuntze.

The corollas of *Clerodendrum glabrum* are usually described as "white" [e.g., Dale & Greenway (1961), Huber (1963), and Venter (1972) and on *Barbosa & Balsinhas* 5532, *Barbosa & Lemos* 7578 & 7841, *Edwards* 2933, *Estêves de Sousa* 160, *Faulkner* 671, 1690, & 2552, *Forbes* 631, *Frazier* 1125, *Galpin* 774, *Hornby* 2556, *Herb. Bailey s.n.*, *Lemos & Balsinhas* 17, 78, & 91, *McClintock s.n.*, *Marques* 2496, *Rodin* 4076, *Schijff* 4218, *Schlieben* 2635, *Suehiro s.n.*, *Tanner* 2306, 3031, 3325, 3550, & 3671, *Torre* 1731, *Welwitsch* 5625, 5651, & 5710, *Wild* 5864, and *Wood* 1204], but are said to have been "pure-white" on *Winter & Giess* 7011, "white-cream" on *Sidey* 3879, "white or pinkish" by the Baileys (1976), "pale-pink" on *Bayliss* 4400 & 6073 and *Scheepers* 848, "pink" on *Acocks* 10976, *Compton* 31271, and *Natal Herb.* 12121, "cream-pink" on *Sidey* 3157 & 3620, "white, tube pinkish" on *Jaasund* 2068, "pale-purple on white" by Martin & Noel (1960), "purplish-mauve on white" by Gledhill (1969), "pale-violet" on *Torre* 2628, and "violet" on *Wall* 54.

Common and vernacular names reported for *C. glabrum* are "bitter-blaar", "bush clerodendrum", "bush glorybower", "huilboom", "ifamu", "kuwakilo", "manuelambeua", "manunhelambeua", "manunhelambeva", "mlanyuni", "mohlokohloko", "mongkangkani", "mothlokuthloku", "motlhokutlloku", "mselenkanga", "mtiwa-nyuni", "mtozatoza", "mukula-usihu", "munukha-tshilongwy" [=smells of cattle dung], "palo de perico", "stinkblaar", "stinkboom", "truitjie-roer-my-nie", "umphehlacwathi" [=twirl the fire sticks], "umkukambiba", "umqangazane", "um-qangazane", "umqagazani", "umqupongo", "umqaqongp", "um-quaquane", "umquaquane", "um-quoqongo", "umqwaqu", "umqwaqwanam", "uphehlacmathi", "verbena tree", and "weeping tree".

Gibbs (1974) reports negative results from the HCl/methanol test and the absence of syringin from the stems and of cyanogenesis from the leaves.

Curran reports finding a stem diameter of 6 inches on a 20-foot tree of this species. Schijff and Bayliss both refer to the flowers as "unpleasant" scented, while Rodin even goes so far as to describe them as having a "skunk-like odor". Most other writers and collec-

tors assert that the flowers are "beautifully fragrant". Palmer & Pitman imply that there is a pleasantly fragrant form of the species and one that is not. The Degener s.n. and Forbes 631 collections, cited below, represent a very broad-leaved form.

Meeuse, in commenting on Transvaal Mus. 15759, avers that it is "Related to *C. glabrum*. Keys out to *C. glabratum* in Thomas' key, but calyx-teeth are erect and I can find remains of petioles on thigs. I feel inclined to make it a var. of *C. glabrum*." Dale 2116 and Estêves de Sousa 160 are intermediate between *C. glabratum* and *C. glabrum*, with the remains of the petioles conspicuous. Warmela 53310/6 is also intermediate. Pedro & Pedrogar 1432 is rather typical *C. glabrum*, but the petiolar remains are quite distinct and the leaf-blades are very thin (rather than thicker in texture as is usual). Gomes e Sousa 1668 seems to be typical *C. glabrum*, but, again, the petiolar remains are very obvious on the stems.

The fruit of *Clerodendrum glabrum* is eaten by birds such as white-eyes and bulbuls in South Africa. The leaves on Tanner 2847 are described as having been "thick, dull green, flaccid".

The Baileys (1948) refer to the species as "adapted to S. Calif. and S. Fla. [U.S.A.]" in life zone 9, but in England, according to Syngé (1956), it must be grown in a greenhouse. Williams (1949) lists it from Zanzibar and Pemba islands. The Morales Ruano collection, cited below, seems to have come from wild (naturalized) material -- its accompanying label gives no indication that it was taken from a cultivated plant. Pencilled floral sketches accompany Suehiro s.n. Gomes e Sousa 1711 is said to match perfectly Welwitsch 5625, 5627, & 5721 in the British Museum herbarium. Schlechter 6285 seems to be a topotype collection, from Bashee, and is, indeed, an excellent match for the type collection from that locality. Krauss 100 is the type collection of *Ehretia triphylla*.

Pearson (1901) cites Cooper 3496, Drège s.n., Galpin 2937, and MacOwan 748 from Cape Province, South Africa, Galpin 774, Herb. Wood 4170, and Thorncroft 48 from Transvaal, and Bowker 549, Cooper 1220, Drege s.n., Gerrard 638 & 726, Gerrard & McKen 661, Hewitson s.n., Krauss 100, and Wood 7551 from Natal.

Thomas (1936) cites the following collections: from Mombasa - Scott Elliot 6103; from Tanganyika - Busse 2310 & 2433, Hildebrandt 1298, Holst 3076, Holtz 520, 1916, 2539, & 2730, Lyne 47, Schlieben 2635, and Stuhlmann 192, 293, 7375, 7481, 7522, 7558, 7559, 7648, 7655, 7689, 7691, 7703, 7705, 7718, 7744, 7780, 7841, 7896, 7899, 8452, 8497, I.628, & I.632; from Mozambique - Kirk s.n., Peters s.n., Rodrigues de Carvalho s.n., and Schlechter 12004; from Natal - Bachmann 1148 & 1150, Landauer 97, Rudatis 383 & 1825, and Wood 939 & 6661; from Cape Province - Britten s.n., Drège 3485 & s.n., Ecklon s., n., and Schlechter 6285; and from Angola - Gossweiler 157 and Welwitsch 5625, 5651, 5657, 5721, & 5725.

Good & Exell (1930) cite Gossweiler 157, 463, & 1529 from Angola, asserting that the species is "Widespread in Tropical and South Africa". Baker (1900) cites Scott-Elliott 6103 from Mombasa, Monteiro s.n. and Welwitsch 5625, 5651, 5656, 5657, 5710, 5721, 5752, & 5753 from Angola, Kirk 20 from French Island, Kirk s.n. from Tanzania, and Forbes s.n. and Kirk s.n. from Mozambique. Hiern (1900) cites

the same Welwitsch numbers, all from Loanda, as well as his no. 5655 as "perhaps that species" from Icolo e Bengo, Angola.

Reis & Lipp (1982) cite *Tanner 3671* from Tanganyika; Van der Schijff (1969) cites his nos. 170, 597, 1608, 1744, 3445, & 4218 from the Kruger National Park; Friedrich-Holzhammer (1967) cites *Winter & Gicss 7011* from Namibia; Altschul (1973) cites *Watt & Brandwyk 1731* from South Africa; and Jacobsen (1973) cites his no. 3657 from Zimbabwe.

Huber (1963) cites *Deighton 3349 & 4623* from Sierra Leone, giving the species' natural distribution, as known to him, as "From Mombasa southwards to the eastern Cape Province; also in Angola." Hutchinson (1946) cites his no. 2449 from South Africa.

It should be noted here that the *C. ovale* Klotzsch, *C. ovalifolium* Engl., and *C. rehmannii* Gürke, often included in the synonymy of typical *Clerodendrum glabrum*, actually belong in the synonymy of *C. glabrum* var. *vagum* (Hiern) Mold., as does also *C. glabrum* var. *ovale* H. H. W. Pearson; *C. glabrum* var. *angustifolium* E. Mey., however, is regarded by me as a valid variety (q.v.).

For some reason not obvious to me, Thomas (1936) regards *Drège 3485* [Key, 8-6-1832] as the type collection of *Clerodendrum glabrum*.

The Meyer (1838) work, in which *C. glabrum* was first described, is usually cited in bibliographies as "1: 237" and the year of publication as "1835", "1836", or "1837" [as, for instance, by Hiern (1900)], but page 237 occurs in fascicle 2 of two continuously paged fascicles and pp. 173--326 were not actually published until January 14 and 20, 1838.

Material of typical *Clerodendrum glabrum* has been misidentified and distributed in some herbaria as *C. eriophyllum* Gürke, *C. glabratum* Gürke, *C. ovale* Klotzsch, *C. ovale* Kunth, *C. phlomidis* L., *C. trichotomum* Thunb., *C. trichotomum* var. *fargesii* (Dode) Rehd., *Volkméria aculeata* L., *Nuxia congesta* R. Br., and even *Rubiaceae* sp.

On the other hand, the *Faulkner 671*, *Schlieben 2635*, and *Sidey 3157*, distributed as typical *C. glabrum*, actually represent *C. glabrum* var. *angustifolium* E. Mey., while *Hnatiuk 731313* and *Wood 1623 & 1624* are *C. glabrum* var. *minutiflorum* (J. G. Baker) Fosberg, *Dahlstrom 1517 & 1942*, *Edwards 1553*, *Galpin 9059*, *Gibson 3*, *Govt. Herb. Salisb. 33103*, *Greenlow s.n.*, *Meebold 12835 & 12842*, *Read 1019*, *Schlieben 9204*, and *Werdermann & Oberdieck 1805* are *C. glabrum* var. *vagum* (Hiern) Mold., *Walther s.n.* [July 1934] is *Calodendron capense* Thunb. in the *Rutaceae*, and *Haptrom & Lindberg s.n.* is something in the *Myoporaceae*.

Citations: FLORIDA: Dade Co.: *Buswell s.n.* [Miami, Jan. 17, 1937] (Bu, Ws), *s.n.* [Miami, Feb. 7, 1937] (N, N, N, N), *s.n.* [May 15, 1937] (Bu); Herb. N. Y. Bot. Gard. acc. 2304 (N); *Phillips 1906* (Tu--79038); *Small & Alexander s.n.* [Miami, May 15, 1937] (H--83119). GUATEMALA: Sacatepéquez: *Morales Ruano 1374* (F--605688, Ld--photo, N, N--photo). BERMUDA ISLANDS: Main: *O. Degener s.n.* [Aug. 3, 1921] (A, Ms). TANZANIA: Tanganyika: *Busse 2360* (Br), 2433 [Peter 51872] (B); *Faulkner 1690* (S); *Frazier 1125* (W--2810810); *Jaasund 2068* (Go); *J. Proctor 2504* (N); *Tanner 2306* (Ba, Mi, N), 2847 (Ba), 3031 (Ba, N), 3325 (Ba, Mi, N), 3550 (N, Na), 3671 (Ba, Ca--1218827, N). ZAN-

ZIBAR: Faulkner 2552 (S); E. H. L. Krause 16807 (B), 16808 (B).
 KENYA: Dale 2116 (Af), 3571 (Br), 3804 (Br); Napier 6247 (Br); Wall 54 (Ew). MALAWI: Stolz 1166 (Af, Cp, N, N--photo, S, S). MUZAMBIQUE: Inhambane: Gomes e Sousa 1668 (Af, Br), 1711 (Br, Ul); Torre 2648 (Ul). Gazaland: Herb. Gazaland Exped. s.n. [July 1915] (Ld), s.n. [VIII.1915] (Ul); Grandvaux Barbosa & Lemos 7826 (Ul), 7841 (Ul); Lemos & Balsinhas 78 (Ul), 91 (Ul); Torre 6675 (Ld, Ul); Transvaal Mus. Herb. 15759 (Tm). Lourenço Marques: Balsinhas 278 (Ul), 724 (Ul), 735 (Ul); Borle 326 (En); Connell s.n. (Af); Estêves de Sousa 160 (Af); Figueiredi Gomes e Sousa 3776 (S); Grandvaux Barbosa & Lemos 7578 (Ul), 8666 (Ul); Herb. Lab. Quim. Serv. Saúde 39201 (Ul); Hornby 2556 (Rh); Junod 122 (Ul); Lemos & Balsinhas 17 (Ul); Marques 2496 (Mu); Schlechter 12004 [Herb. Thén. 1.2927] (B, Br, L, S, Vt, W--553350); Sousa 160 (Ul); Torre 1731 (Ul), 2502 (Ul), 7586 (Ul). Zambesia: Wild 5864 (Ul). Province undetermined: Barbosa & Balsinhas 5532 (Ul); Pedro & Pedrogar 1432 [Sul de Save] (Af). NAMIBIA: Rodin 9050 (Mu); Winter & Giese 7011 (Mu). BOTSWANA: Pole-Evans 3231 (Cb). SWAZILAND: Compton 31271 (Mu); Kemp 694 (W--2781905). SOUTH AFRICA: Cape Province: Acocks 10976 (Af); Bayliss BS.4400 (Ba, N, W--2616805), 6073 (Ba, N); Bowie s.n. [Albany] (Bm); Drège s.n. [Basche] (L--isotype, N--photo of isotype, S--isotype), s.n. [Key Isl.] (N--photo, S, S); Ecklon s.n. [10.3] (L); Ecklon & Zeyher s.n. [Uitenhaaf] (S); E. P. Phillips 177 (Mu--4058, Mu--4221); Schlechter 6285 (Af, Br, Cb, S); Sidey 3620 (W--2410037); C. A. Smith 3809 (Cb); Thorncroft 48 [Natal Herb. 4705] (Na); Wilkes s.n. [Cape of Good Hope] (W--41181). Natal: D. Edwards 2933 (Mu); Forbes 631 [Natal Herb. 21009] (Ms, Na); Gerstner s.n. [Natal Herb. 22611] (Na); Krauss 100 (Bm, E--140859, Ld--photo, Mu--65, N--photo); Kuntze s.n. [Clairmont 10/ 3/94] (N, W--554738); Natal Herb. 966 (Na), 12121 (Na); Peter 45290 [V.11] (B); Sidey 3879 (W--2552756); O. West 879 (Cb); J. M. Wood 939 (W--206542), 1204 (Na--5701), 6661 (Na--7645), 10978 (Vi). Transvaal: Breyer s.n. (Tm--20940); Dahlstrand 616 (Go); Galpin 774 (Ka--92274, Ld, Ld, S); Kassner 1334 (Br); Krige 182 (Af); Rodin 4076 (Ba); Scheepers 848 (Mu); Schijff 4218 (B); Schlechter 6285 (Ca--299094, Cb); Schlieben & Strey 8304b (Mu); Strey 3562 (Mu); Thorncroft 42 [Herb. Transvaal Mus. 9622] (Cb); Warmela 54410/6 (Af); O. West 122 (S). RÉUNION ISLAND: Lotsy T.11 (Mu). INDIA: Bombay Island: Herb. Blatter 15039 (Xa). HAWAIIAN ISLANDS: Oahu: Suehiro s.n. [Aug. 4, 1939] (Mu). CULTIVATED: Australia: M. S. Clemens 43441 (Mi). Bermuda: Bailey, Whetzel, Degen-er, & McCallan 121 (Ba), s.n. [Aug. 3, 1921] (Ba), s.n. [Montrose, Mar. 1, 1922] (Ba, Ld--photo, N--photo); Brown, Britton, & Wortley 1641 (B, K, N). Brazil: Curran 337 (W--920213); Glaziou 6653 (B, Cb, Cp, K, N, P). California: McClintock s.n. [West Los Angeles, Sept. 4, 1945] (Gg--361161, N), s.n. [Oct. 24, 1945] (Gg--361162); McClintock, Spaulding, & Spaulding s.n. [October 25, 1945] (N); Walther 854 (A, Ba, Gg--170500), s.n. [Santa Monica, Aug. 27, 1927] (F--647688), s.n. [Santa Monica, Sept. 1928] (Gg--159787). Florida: Herb. Bailey s.n. [Royal Palm Nurseries, June 19, 1937] (Ba). Hawaiian Islands: Caum s.n. [6/11/32] (Bi); Isenberg s.n. [June 19, 1941] (Bi); A. R. Moldenke 93 [H. N. Moldenke 21866] (Mi); H. N. & A. L. Moldenke 21842 (Mi); Suehiro s.n. [Aug 4, 1939] (Bi, Bi). In-

dia: G. L. Shah 4868 (Xa). Java: H. Hallier C.126 (Le, X, X). Sri Lanka: Collector undetermined 125/49 (Pd). MOUNTED ILLUSTRATIONS: Sim, For. Fl. Colony Cape pl. 120, fig. 2. 1906 (Ld).

CLERODENDRUM GLABRUM var. *ANGUSTIFOLIUM* E. Mey., Comm. Pl. Afr.

Austr. 273 [as "*Clerodendron*" & "*angustifolia*"]. 1838; B.

Thomas, Engl. Bot. Jahrb. 68: [Gatt. *Clerod.*] 76 in syn. 1936;

Mold., Phytol. Mem. 2: 245, 386, & 537. 1980.

Synonymy: *Clerodendron glabrum* & *angustifolia* E. Mey., Comm. Pl. Afr. Austr. 273. 1838. *Clerodendron glabrum angustifolia* Sims, Sketch Check-list Fl. Kaffr. 63. 1894. *Clerodendrum glabrum* var. *angustifolia* E. Mey. apud B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. *Clerod.*] 76 in syn. 1936. *Clerodendron glabrum* var. *angustifolium* E. Mey. ex Mold., Prelim. Alph. List Inv. Names 20 in syn. 1940.

Bibliography: E. Mey., Comm. Pl. Afr. Austr. 273. 1838; Harv., Gen. S. Afr. Pl., ed. 2, 269. 1838; Sims, Sketch Check-list Fl. Kaffr. 63. 1894; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. *Clerod.*] 76. 1936; Mold., Prelim. Alph. List Inv. Names 20. 1940; Mold., Alph. List Inv. Names 17. 1942; Mold., Résumé 263. 1959; Mold., Fifth Summ. 1: 445. 1971; Mold., Phytol. Mem. 2: 245, 386, & 537. 1980; H. N. & A. L. Mold. in Dassan. & Fosb., Rev. Handb. Fl. Ceyl. 4: 458. 1983.

This variety differs from the typical form of the species in having the leaf-blades ovate-lanceolate and only half as large. It is based on an unnumbered Drège collection from "Ad ripas fluvii Key, alt. 500 ped. (V,b)", Cape Province, South Africa -- probably the sheet in the Leningrad herbarium marked "var." on the label represents this same collection. Thomas (1936) does not regard the variety as sufficiently distinct to be regarded as valid, but does not cite the aforementioned collections.

The material of this taxon cited below has previously been regarded and distributed as typical *C. glabrum* E. Mey.

Citations: TANZANIA: Tanganyika: Faulkner 671 (S). CHOLE ISLAND: Schlieben 2635 in part (W--2214364). MAFIA ISLAND: Schlieben 2636 in part (B). SOUTH AFRICA: Cape Province: Drège s.n. ["var."] (L--isotype).

CLERODENDRUM GLABRUM var. *MINUTIFLORUM* (J. G. Baker) Fosb., Kew Bull. 33: 193. 1978.

Synonymy: *Clerodendron minutiflorum* J. G. Baker, Kew Bull. Misc. Inf. 1894: 150. 1894. *Clerodendrum glabrum* "sensu Fosberg" ex Fosb. & Renvoize, Kew Bull. Addit. Ser. 7: [Fl. Alcabra] 222 in syn. 1980.

Bibliography: J. G. Baker, Kew Bull. Misc. Inf. 1894: 150. 1894; Schinz, Abhandl. Senckenb. Naturf. Gesellsch. 21: 90. 1897; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 101. 1901; Voelzkow, Abhandl. Senckenb. Naturf. Gesell. 26: 552. 1902; Hemsl., Kew Bull. Misc. Inf. 1919: 128. 1919; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 101. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 122 & 182. 1949; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 101. 1959; Mold., Résumé 155 & 451. 1959; Fosberg & Renvoize, Atoll Res. Bull. 136: 64, 109, & 152. 1970; Fosberg, Phil. Trans. Roy. Soc. B.260: 218 & 225. 1971; Mold., Fifth Summ. 1: 258 (1971) and 2: 869. 1971; Ren-

voize, Phil. Trans. Roy. Soc. B.260: 230. 1971; Renvoize, Kew Bull. 30: 151. 1975; Fosberg, Kew Bull. 33: 143--144. 1978; Fosberg & Renvoize, Kew Bull. Addit. Ser. 7: [Fl. Aldabra] 220--222, fig. 35 (3 & 4). 1980; Mold., Phytol. Mem. 2: 247, 392, & 537. 1980; Mold., Phytologia 50: 251 & 259 (1982) and 58: 189. 1985.

Illustrations: Fosberg & Renvoize, Kew Bull. Addit. Ser. 7: [Fl. Aldabra] 221, fig. 35 (3 & 4). 1980.

An erect deciduous shrub or small straight tree, to 5 m. tall; branchlets slender, rather pale, the younger portions pale-yellowish or cream, pilose or tomentulose, the indument varying in density, lenticellate; lenticels white; nodes prominent; principal internodes abbreviated; leaves sparse, soft, decussate-opposite to alternate or ternate (often on the same plant), distinctly petiolate, usually clustered at the tips of the branchlets; petioles slender, 1--2 cm. long; leaf-blades ovate to elliptic, 5--9 cm. long, 3--6 cm. wide, green or light-green to gray-green on both surfaces, often nigrescent in drying, apically acuminate or more rarely acute or even rounded, marginally entire, basally acute to attenuate or obtuse to subcordate, frequently sickle-shaped and conduplicate, subglabrous on both surfaces, on sterile shoots sometimes larger, more broadly ovate and basally subcordate; inflorescence mostly terminal, the cymes small, dense, 2--4 cm. long and wide, slender, irregularly branched, tomentellous-pubescent or pilose throughout, occasionally some in the upper leaf-axils; pedicels short; flowers strongly fragrant; calyx campanulate, 2--3 mm. long, externally woolly, the rim subtruncate to very shallowly dentate or lobed, the teeth minute, deltoid; corolla white, hypocrateriform, externally more or less minutely pubescent, the tube cylindric, 5--6 mm. long, 1 mm. wide, often almost 3 times as long as the calyx, the limb 2--4 mm. wide, the 5 lobes oblong, 2 mm. long, 1 mm. wide, apically rounded or obtuse; stamens 4, exerted about 5 mm. from the corolla-mouth; pistil single, elongate; style equaling the stamens, apically purple; stigma shortly bifid; fruiting-calyx accrescent, spreading to almost patelliform, persistent, stiff; fruit drupaceus, orange-yellow or orange, globose to obovoid, 4--6 mm. long and wide, apically rounded to papilliform and glabrous; seeds solitary in each cell, turbinate, about 7 mm. long and 4 mm. wide.

This variety is based on an unnumbered W. L. Abbott collection from Aldabra, deposited in the Kew herbarium. Fosberg & Renvoize (1980) describe the calyx as "2--3 cm long", but this is obviously an unfortunate typographic error -- "cm" instead of "mm".

Fosberg (1978) comments that *C. glabrum* is "An extremely variable African species with a very wide distribution, extending over the whole of southern Africa, north to Angola in the west and north through East Africa to Kenya and Uganda; missing from Madagascar but possibly represented there by *C. humbertii* Moldenke, which seems similar in many respects. *C. glabrum* is found in one of its forms on Chole Island, near Mafia. This species varies widely in leaf size and shape, as well as in the density and nature of the indument of the young parts, inflorescence, and flowers. *C. minutiflorum* Baker seems to fall well within this range of variation, so that it is appropriate to combine the two. The only feature noted in which

they rather consistently differ is in the margin of the calyx, which in African specimens has prominent triangular to triangular-acuminate lobes, while in Aldabra material it is from subtruncate to minutely denticulate or with very low scarcely denticulate lobes. This, with a tendency toward wider, sometimes even subcordate, leaves, seems to warrant maintaining it in varietal rank. A number of varieties have been proposed for mainland African plants, mainly on leaf characters, but none matches this island population." He and Renvoize (1980) assert that the Aldabra plant is "A constituent of the inland scrub communities. Flowers mainly during the wet season, but responds to unseasonal rains. A favourite food plant of tortoise."

There appear to be two forms of the variety -- one is a form whose leaves are very thin and turn black in drying, usually remaining perfectly flat in pressing (e.g., Fosberg 48701 & 48836, Fosberg & McKenzie 49644, and Frazier 40); the other is a form whose leaves remain gray-green in drying, are thicker in texture, and tend to be conduplicate (e.g., Fosberg 48747, 48803, 48938, 49149, 49207, 49371, 49391, 49400, 49491, & 49746, Fosberg & Grubb 49155, and Frazier 708).

Recent collectors have encountered this plant on sandy shores, the shores of lagoons, in guano pits, and in mixed scrub on limestone, at or near sealevel, in flower from November to February, and in fruit in January. On South Island Fosberg reports it "Very local in deep pits and fissures in prominent champignon near the coast"; on West Island Wood found it "locally common". Ridgway asserts that the plant has a "strong, sharp, attractive perfume to the flowers and leaves".

The corollas are said to have been "white" on Renvoize 961 and Wood 1624 and "white or cream" on Ridgway 110. Wood reports that his no. 1623 exhibits anthers that are fertile and exerted, while on his no. 1624 they are sterile and included.

Fosberg (1978) cites (in addition to the collections cited below) the following: Dupont 51, Fryer 77, and Thomasset 251 from Aldabra; Frazier s.n. from Mentor; Dupont 105 and Stoddart 1069 & 1103 from Assumption; Thomasset s.n. from Cosmoledo; and Veevers-Carter 110 from Astove.

Material of this variety has been misidentified and distributed in some herbaria as typical *C. glabrum* E. Mey.

Citations: COMORO ISLANDS: Aldabra: Abbott s.n. (Ld--photo of isotype, W--286411--isotype); Hnatiuk 731313 (W--2834336). Assumption: Frazier 708 (W--2878696). South: Fosberg 48938 (W--2878407), 49149 (N, W--2878421), 49207 (W--2878408), 49371 (W--2878380), 49391 (W--2878396), 49400 (W--2878395); Fosberg & Grubb 49155 (W--2878381); Fosberg & McKenzie 49644 (W--2878394); Frazier 40 (W--2878695); Hnatiuk s.n. [Cinq Cases, 26/3/74] (W--2834345: Renvoize 961 (W--2835358), 1013 (W--2940261). West: Fosberg 48701 (W--2878409), 48747 (W--2878416), 48803 (W--2878415), 48836 (W--2878405), 49491 (W--2878404); Hnatiuk 731501 (W--2834337); D. Wood 1623 (W--2835360), 1624 (W--2835359). SEYCHELLES ISLANDS: Astove: Fosberg & Graham 49746 (W--2878378); Ridgway 110 (Ld, W--2834346). MOUNTED ILLUSTRATIONS: Fosberg & Renvoize, Kew Bull. Addit. Ser. 7: [Fl. Aldabra]

221, fig. 35 (3 & 4). 1980 (Ld).

CLERODENDRUM GLABRUM var. *VAGUM* (Hiern) Mold., Prelim. Alph. List
Inv. Names 40 hyponym. 1940; *Phytologia* 13: 306. 1966.

Synonymy: *Clerodendron ovale* Klotzsch in Peters, *Naturwiss. Reise Mossamb. Bot.* 1: 257. 1861 [not Baker, 1900, nor Kunth, 1947].

Clerodendron eriophyllum Gürke, *Engl. Bot. Jahrb.* 18: 178. 1893.

Clerodendron ovalifolium Engl., *Pflanzenw. Ost-Afr. A.* 124: 341.

1895. [not A. Gray, 1862, nor (A. L. Juss.) Bakh., 1970]. *Clerodendron rehmannii* Gürke, *Engl. Bot. Jahrb.* 28: 294. 1900. *Clerodendron rehmannii* Gürke apud K. Schum., *Justs Bot. Jahresber.* 28 (1): 495.

1900. *Siphonanthus rehmannii* (Gürke) Hiern, *Cat. Afr. Pl. Coll.*

Welw. 1: 842. 1900. *Siphonanthus glabra* var. *vaga* Hiern, *Cat. Afr.*

Pl. Coll. Welw. 1: 842. 1900. *Siphonanthus glabra* var. *incarnata*

Hiern, *Cat. Afr. Pl. Coll.* Welw. 1: 842. 1900. *Clerodendron glabrum*

var. *ovale* H. H. W. Pearson in *Thiselt.-Dyer, Fl. Cap.* 5: 219. 1912.

Clerodendrum glabrum var. *pubescens* Thomas, *Engl. Bot. Jahrb.* 68:

[*Gatt. Clerod.*] 77. 1936. *Clerodendrum rehmannii* Gürke apud Thomas,

Engl. Bot. Jahrb. 68: [*Gatt. Clerod.*] 77. 1936. *Clerodendron erio-*

phyllum Gürke apud Thomas, *Engl. Bot. Jahrb.* 68: [*Gatt. Clerod.*] 77.

1936. *Clerodendron ovale* Klotzsch apud B. Thomas, *Engl. Bot. Jahrb.*

68: [*Gatt. Clerod.*] 76 in syn. 1936. *Clerodendron ovalifolium* Engl.

Bot. Jahrb. 68: [*Gatt. Clerod.*] 76 in syn. 1936. *Clerodendron glab-*

rum var. *ovale* (Klotzsch) H. H. W. Pearson ex Mold., *Résumé* 263 in

syn. 1959. *Clerodendron glabrum* var. *ovate* Pearson ex Mold., *Résumé*

Suppl. 3: 30 in syn. 1962. *Clerodendron eraphyllum* Gürke ex Mold.,

Résumé Suppl. 15: 19 in syn. 1967. *Clerodendrum eriophytum* Guerke

ex Richards & Morony, *Check List Fl. Mbala* 237 sphalm. 1969. *Clero-*

dendron rehmannii var. *tenuifolium* Merxm. ex Mold., *Phytol. Mem.* 2:

388 in syn. 1980

Bibliography: Klotzsch in Peters, *Naturwiss. Reise Mossamb.* 6

[*Bot.*] 1: 257. 1861; Vatke, *Linnaea* 43: 537. 1882; Gürke, *Engl. Bot.*

Jahrb. 18: 178. 1893; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp.

1, 1: 561. 1893; Gürke in Engl., *Pflanzenw. Ost-Afr. A:* 94 & 124

(1895) and C: 341. 1895; Kuntze, *Rev. Gen. Pl.* 3 (2): 250. 1898; J.

G. Baker in *Thiselt.-Dyer, Fl. Trop. Afr.* 5: 293, 298--300, & 515.

1900; Hiern, *Cat. Afr. Pl. Coll.* Welw. 1: 842. 1900; Durand & Jacks.,

Ind. Kew. Suppl. 1, imp. 1, 101. 1901; H. H. W. Pearson in *Thiselt.-*

Dyer, Fl. Cap. 5: 318--220. 1901; K. Schum., *Justs Bot. Jahresber.*

28 (1): 495. 1902; *Thiselt.-Dyer, Ind. Kew. Suppl.* 2: 44. 1904; Sim,

For. Fl. Cape Colony 286. 1907; Rübsaamen, *Marcellia* 10: 106, fig. 9

& 10. 1911; Dalla Torre, *Justs Bot. Jahresber.* 39 (1): 1328. 1913;

B. Thomas, *Engl. Bot. Jahrb.* 68: [*Gatt. Clerod.*] 43, 76--78, 93, &

95. 1936; Mold., *Geogr. Distrib. Avicenn.* 38. 1939; Mold., *Prelim.*

Alph. List Inv. Names 23 & 40. 1940; Durand & Jacks., *Ind. Kew. Sup-*

pl. 1, imp. 2, 101. 1941; Mold., *Alph. List Inv. Names* 21 & 40.

1942; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 1, 48--52 & 89--

91. 1942; J. Hutchins., *Botanist South. Afr.* 399 & 400. 1946; Jacks,

in Hook. f. & Jacks., *Ind. Kew.*, imp. 2, 1: 561. 1946; Mold., *Alph.*

List Cit. 1: 23, 174, & 254 (1946), 2: 407, 628, & 641 (1948), and

3: 762, 849, & 977. 1949; Mold., *Known Geogr. Distrib. Verbenac.*,

ed. 2, 115--121, 181, & 183. 1949

[to be continued]



Moldenke, Harold N. 1986. "Notes on the genus *Clerodendrum* (Verbenaceae). XVI." *Phytologia* 59, 462–499.

<https://doi.org/10.5962/bhl.part.2777>.

View This Item Online: <https://www.biodiversitylibrary.org/item/47069>

DOI: <https://doi.org/10.5962/bhl.part.2777>

Permalink: <https://www.biodiversitylibrary.org/partpdf/2777>

Holding Institution

New York Botanical Garden, LuEsther T. Mertz Library

Sponsored by

The LuEsther T Mertz Library, the New York Botanical Garden

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Phytologia

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.