

ADDITIONAL MATERIALS TOWARD A MONOGRAPH OF THE GENUS
CALLICARPA. XVI

Harold N. Moldenke

CALLICARPA L.

Additional synonymy: Tometax L. apud Raizada, Indian Forest. 92: 304, in syn. 1966.

Additional & emended bibliography: Rheede & Munnicks, Hort. Ind. Malab. 4: 123--124, pl. 60. 1683; Ray, Hist. Pl. 2: 1787--1788. 1693; Dassaw, Nov. Gen. Pl. Zeyl. 4--5 & [15]. 1747; L., Fl. Zeyl., ed. 1, 24 & [250] (1747) and ed. 2, 24 & [250]. 1748; Dassow in L., Amoen. Acad. 1: 389. 1749; L., Sp. Pl., ed. 2, 1: 161 & 172. 1762; J. A. Murr. in L., Syst. Nat., ed. 12, 2: 125. 1767; L., Mant. Pl. Alt. 198, 331, & [576]. 1771; J. A. Murr. in L., Syst. Veg., ed. 12 ["13"], 130 & 831. 1774; Lam., Dict. Encycl. Méth. 1: 54--55. 1783; Poir. in Lam., Encycl. Méth. Bot. 7: 697. 1806; Dennst., Schlüss. Hort. Malab. 16, 30, & 31. 1818; Ainslie, Mat. Ind. 2: 180--182. 1826; O'Shaughnessy, Beng. Disp. 456. 1841; Sieb. & Zucc., Abh. Akad. Muench. 4 (3) [Fl. Jap. Fam. Nat. 2]: 30, 115, & 155--156. 1846; R. Wight, Illustr. Ind. Bot. 2: 217, pl. 173 bis, fig. 5. 1850; Benth. in Hook., Journ. Bot. & Kew Gard. Misc. 5: 135--136. 1853; Gamble, Man. Indian Timb., ed. 1, 282--283 & 503. 1881; Dymock, Veg. Mat. Med. W. Ind. 716 & 745. 1884; Maingay, Kew Bull. Misc. Inf. 1890: 127. 1890; Briq., Bull. Herb. Boiss., sér. 1, 4: 345--346 & 924. 1896; H. N. Ridl., Journ. Straits Med. Assoc. 5: 127. 1897; H. N. Ridl., Journ. Roy. Asiat. Soc. Straits Br. 30: 79. 1897; H. N. Ridl., Agric. Bull. Straits & Fed. Malay States 1: 218. 1902; Gamble, Man. Indian Timb., ed. 2, pr. 1, 525 & 770. 1902; Ahmad, Agric. Bull. Straits & Fed. Malay States 6: 162. 1907; Merr. & Merritt, Philip. Journ. Sci. Bot. 5: 380--381 & 554. 1910; Perrot & Vogt, Trav. Lab. Mal. Méd. Paris 9: 215 & 223. 1913; Gamble, Man. Indian Timb., ed. 2, pr. 2, 525 & 770. 1922; H. N. Ridl., Fl. Malay Penins. 2: 614--617. 1923; Kalaw & Sacay, Philip. Agriculturist 14: 427. 1925; Janson., Mikrogr. Holzes Java 4: 774. 1928; Gimlett & Burkill, Gard. Bull. Straits Settl. 6: 354, 387, 388, & 394. 1930; Burkill & Haniff, Gard. Bull. Straits Settl. 6: 233. 1930; Villadolid & Sulit, Philip. Agriculturist 21: 30. 1932; L., Sp. Pl., ed. 1, pr. 2, 1: 111 & 118. 1934; Makins, Ident. Trees & Shrubs 74 & 258, fig. 62 G. 1936; Masam., Trans. Nat. Hist. Soc. Formos. 30: 63--65. 1940; Greene & Blomquist, Fls. South 109. 1953; T. H. Everett, Read. Dig. Compl. Book Gard. 420 & 605. 1966; Burkill, Dict. Econ. Prod. Malay Penins. 1: 407--409 & 1085. 1966; C. L. Rodgers, Castanea 34: 390. 1969; Elliotson, Complete Gard. Book South. Hemisph., ed. 6, 16 & 163. 1970; Vidal & Lemoine, Journ. Agr. Trop. & Bot. Appl. 17: 28--29. 1970; Moldenke, Phytologia 21: 149--164 & 208--242. 1971.

Greene & Blomquist (1953) give "beauty-berries" as the common

name for members of this genus. Burkill (1966) tells us that Callicarpa is "A genus of shrubs and trees....found in the warmer parts of Asia, to Australia and the Pacific, and again in America. The plants are sub-aromatic, and often bitter in taste. Throughout the East they are used medicinally: some internally, others for poulticing. Several species of America are active diuretics and purgatives. The wood is of little use. The Malayan species are much of one type, and 'tampang besi' is the name applied to the first three mentioned below [C. candicans, C. longifolia, C. maingayi], and to C. angustifolia, King and Gamble. Whether C. tomentosa differs sufficiently in medicinal uses that it should bear a distinguishing name, is not clearly demonstrated yet. The common noun 'tampang', to which attention has just been called, indicates that the plants are used for making plasters. 'Tampal' is a variant of it, and other variants may be recognized.....As far to the eastward, also, as the Philippine Islands, species of Callicarpa obtain such names; and there can be no doubt that considerable reliance has been put on them as simples, from end to end of Malasia. Three species are used as fish-poisons in the Philippine Islands.....The active substance is a saponin. It is interesting that the twigs of two of them, dried until the leaves have fallen, should be used as a bait for prawns. C. reevesii, Wall., of Southern China, and several others are in cultivation in the Botanic Gardens, Singapore; for they are ornamental plants."

CALLICARPA ACUMINATA H.B.K.

Additional bibliography: Moldenke, *Phytologia* 21: 150, 233, 235, & 240. 1971.

CALLICARPA ALBIDO-TOMENTELLA Merr.

Additional & emended bibliography: E. D. Merr., *Philip. Journ. Sci. Bot.* 12: 300--301 & 382. 1917; Moldenke, *Phytologia* 13: 438. 1966.

CALLICARPA AMERICANA L.

Additional & emended bibliography: L., *Sp. Pl.*, ed. 1, pr. 1, 1: 111. 1753; L., *Syst. Nat.*, ed. 10, 2: 894. 1759; J. A. Murr. in L., *Syst. Veg.*, ed. 12 ["13"], 130. 1774; Ainslie, *Mat. Ind.* 2: 181. 1826; L., *Sp. Pl.*, ed. 1, pr. 2, 1: 111. 1934; Makins, *Ident. Trees & Shrubs* 258. 1936; Greene & Blomquist, *Fls. South* 109. 1953; Rodgers & Shake, *Castanea* 30: 163. 1965; T. H. Everett, *Read. Dig. Compl. Book Gard.* 420 & 605. 1966; C. L. Rodgers, *Castanea* 34: 390. 1969; Moldenke, *Phytologia* 21: 150. 1971.

Additional illustrations: Greene & Blomquist, *Fls. South* 109. 1953.

CALLICARPA ANGUSTA Schau.

Additional & emended bibliography: E. D. Merr., *Philip. Journ. Sci. Bot.* 12: 299, 301, & 382. 1917; Moldenke, *Phytologia* 21: 150, 158, & 210. 1971.

Merrill (1917) states that C. subintegra Merr. resembles C.

angusta, "from which it is readily distinguished by its denser indumentum, its entire or but slightly toothed leaves, fewer nerves, and longer petioles".

The Foxworthy s.n. [Herb. Philip. Bur. Sci. 660], previously cited by me as C. angusta, is actually the type collection of C. rivularis Merr.

CALLICARPA ANGUSTIFOLIA King & Gamble

Additional bibliography: Burkill, Dict. Econ. Prod. Malay Penins. 1: 407. 1966; Moldenke, Phytologia 20: 493. 1971.

CALLICARPA ARBOREA Roxb.

Additional & emended bibliography: E. D. Merr., Philip. Journ. Sci. Bot. 12: 298 & 382. 1917; Elm., Leaflet. Philip. Bot. 10: 3860. 1939; Deb, Sengupta, & Mallick, Bull. Bot. Soc. Bengal 22: 199. 1968; Corner & Watanabe, Illustr. Guide Trop. Pl. 752. 1969; Moldenke, Phytologia 21: 151, 154, 215, 223--225, & 230. 1971.

Additional illustrations: Corner & Watanabe, Illustr. Guide Trop. Pl. 752. 1969.

Deb & his associates (1968) reduce C. arborea Roxb. to synonymy under C. tomentosa (L.) Murr.

The Kuntze 6649, distributed as C. arborea, is actually C. vestita Wall.

CALLICARPA ARBOREA var. **PSILOCALYX** (H. J. Lam) Moldenke

Additional synonymy: Callicarpa magna lilacina Elm., Leaflet. Philip. Bot. 10: 3860. 1939.

Additional & emended bibliography: Elm., Leaflet. Philip. Bot. 3: 1133. 1911; E. D. Merr., Philip. Journ. Sci. Bot. 12: 298 & 382. 1917; Elm., Leaflet. Philip. Bot. 9: 3222 & 3223 (1934) and 10: 3860. 1939; Moldenke, Phytologia 20: 495. 1971.

CALLICARPA BASILANENSIS Merr.

Additional bibliography: E. D. Merr., Philip. Journ. Sci. 30: 86. 1926; Moldenke, Phytologia 15: 16. 1967.

Merrill (1926) was of the opinion that this species probably belongs in the "general group with C. woodii Merr."

CALLICARPA BASITRUNCATA Merr.

Additional bibliography: G. Taylor, Ind. Kew. Suppl. 12: 27. 1959; Moldenke, Phytologia 15: 16. 1967.

CALLICARPA BAVIENSIS Moldenke

Additional bibliography: E. J. Salisb., Ind. Kew. Suppl. 11: 40. 1953; Moldenke, Phytologia 14: 46. 1966.

CALLICARPA BICOLOR A. L. Juss.

Additional bibliography: Roem. & Schult. in L., Syst. Veg., ed. 15 nov., 3: 97. 1818; E. D. Merr., Philip. Journ. Sci. 30: 426. 1926; Elm., Leaflet. Philip. Bot. 10: 3798 & 3860. 1939; Mol-

denke, *Phytologia* 20: 495—496 (1971) and 21: 36. 1971.

CALLICARPA BODINIERI Lévêillé

Additional & emended bibliography: Prain, Ind. Kew. Suppl. 5, pr. 1, 43 (1921) and pr. 2, 43. 1960; Moldenke, *Phytologia* 20: 496—498 (1971) and 21: 33, 43, 46, 48, 102, 103, 108, 210, 212, 214, 240, & 241. 1971.

CALLICARPA BODINIERI var. **GIRALDII** (Hesse) Rehd.

Additional bibliography: Makins, Ident. Trees & Shrubs 258. 1936; Farnsworth, Blomster, Quimby, & Schermerhorn, Lynn Index 6: 262. 1969; Moldenke, *Phytologia* 20: 496 & 497 (1971) and 21: 33, 43, 48, 102, 103, 108, 113, 164, 210, 212, 214, & 240. 1971.

The Herb. Canton Chr. Coll. 12560, distributed as C. bodinieri var. giraldii, is actually C. rubella var. hemsleyana Diels.

CALLICARPA BORNEENSIS Moldenke

Additional bibliography: G. Taylor, Ind. Kew. Suppl. 12: 27. 1959; Moldenke, *Phytologia* 14: 63—64. 1966.

CALLICARPA BRACTEATA Dop

Additional bibliography: Moldenke, *Phytologia* 20: 498 (1971) and 21: 107 & 164. 1971.

CALLICARPA BREVIPES (Benth.) Hance

Additional bibliography: Moldenke, *Phytologia* 20: 498—499 (1971) and 21: 33, 47, 48, 102, 108, 113, 210, 212, 213, & 233. 1971.

Dop (1932) states that C. petelotii Dop resembles C. dichotoma (Lour.) K. Koch and C. brevipes in its glabrous ovary, glabrous branches and leaves, and densely punctate leaf-blades, and that it may represent a natural hybrid between C. longifolia Lam. and C. dichotoma and/or C. brevipes.

CALLICARPA CANDICANS (Burm. f.) Hochr.

Additional synonymy: Callicarpa nana L. ex Elm., Leaflet. Philip. Bot. 10: 3798 & 3860, in obs. 1939. Callicarpa candicans Burm. f. ex Corner & Watanabe, Illustr. Guide Trop. Pl. 751. 1969.

Additional bibliography: Dymock, Veg. Mat. Med. W. Ind. 716 & 745. 1884; Perrot & Vogt, Trav. Lab. Mal. Méd. Paris 9: 215 & 223. 1913; Elm., Leaflet. Philip. Bot. 6: 2084 & 2085. 1913; Burkill & Haniff, Gard. Bull. Straits Settl. 6: 233. 1930; Elm., Leaflet. Philip. Bot. 10: 3860. 1939; Burkill, Dict. Econ. Prod. Malay Penins. 1: 407. 1966; Corner & Watanabe, Illustr. Guide Trop. Pl. 751. 1969; Moldenke, *Phytologia* 21: 151—152, 156, 215, 222, 223, & 225. 1971.

Additional illustrations: Corner & Watanabe, Illustr. Guide Trop. Pl. 751. 1969.

Burkill (1966) discusses this plant by first listing and explaining some of its vernacular names: "tampang bēsi", "tampah

běsi", "tampang běsi merah" (=red-fruited tampang běsi), "tampong běsi puteh", "kuping běsi" (kuping is the crust or scab which forms over a healing sore), "hati-hati ketan" (means as being used like *Coleus*); in Java "měniran bėsar", "měniran kasar", "měniran kėbo", "měniran utan", "songka utan"; in Sundanese "apu-apu", "katumpang budak", "kutumpang kayu"; in Sumatra "sėtampo běsi", "tampal běsi", "tampa běsi". He continues: "The tender leaves are boiled and the decoction is drunk for abdominal troubles....In Java a decoction is used for bringing on the menses, and the leaves are used for poulticing wounds and boils....Under the name 'puchuk ring-ring', the shoots of the plant have been recorded as entering into arrow-poisons.....It is one of the species....used in the Philippine Islands for stupifying fish; yet, after drying, it is also a bait for prawns."

The Kondo 44, distributed as *C. candicans*, is actually *C. subpubescens* Hook. & Arn., while Tsao-Fei 7 is *C. tsiangii* Moldenke.

CALLICARPA CAUDATA Maxim.

Additional & emended bibliography: Maxim., Bull. Acad. Imp. Sci. St. Pétersb. 31: 75 & 76. 1886; Merr. & Merritt, Philip. Journ. Sci. Bot. 5: 381 & 554. 1910; Elm., Leaflet. Philip. Bot. 10: 3860. 1939; Moldenke, Phytologia 21: 33, 108, 225, 233—235, & 240. 1971.

Merrill (1910) says that *C. caudata* is closely allied to *C. stenophylla* Merr., which differs "in its less dense and simply stellate, not plumose-stellate indumentum".

The R. S. Williams 1158, cited by me in Phytologia 14: 143 (1966), is actually *C. formosana* f. *angustata* Moldenke.

CALLICARPA CAULIFLORA Merr.

Additional bibliography: Moldenke, Phytologia 16: 363 & 366. 1968.

Additional citations: PHILIPPINE ISLANDS: Leyte: M. Ramos s.n. [Herb. Philip. Bur. Sci. 41540] (N).

CALLICARPA CLEMENSORUM Moldenke

Additional bibliography: G. Taylor, Ind. Kew. Suppl. 12: 27. 1959; Moldenke, Phytologia 14: 146—147. 1966.

CALLICARPA CUBENSIS Urb.

Additional bibliography: Moldenke, Phytologia 16: 363 (1968) and 21: 215 & 233. 1971.

Additional citations: CUBA: Havana: Sagra s.n. (N—isotype).

CALLICARPA CUBENSIS var. PARVIFLORA Moldenke

Additional bibliography: Moldenke, Phytologia 14: 154—155. 1966.

This variety has been collected near brooks, flowering in March, and fruiting in November.

The Cuesta 1017 [as "Anesta"] and Ekman 11909 & 17930, cited below, were previously cited by me (1940) as anomalous specimens

of C. shaferi Britton & P. Wils., which I now feel that they are not.

Additional citations: CUBA: Pinar del Río: Acuña & Roig 16765 (Ha—istype, N—istype); Cuesta 1017 (N); Ekman 17930 (B, N, N—photo, S, Z—photo). ISLA DE PINOS: Ekman 11909 (B, S, Z—photo).

CALLICARPA DICHOTOMA (Lour.) K. Koch

Additional synonymy: Callicarpa dichotoma Juss., in herb.

Additional bibliography: T. H. Everett, Read. Dig. Compl. Book Gard. 420. 1966; Moldenke, Phytologia 21: 152 & 242. 1971.

Dop (1932) states that C. petelotii Dop resembles C. dichotoma and C. brevipes (Benth.) Hance in its glabrous ovary, its glabrous branches and leaves, and the very numerous glands on the leaf-blades and that it may possible represent a natural hybrid between C. longifolia Lam. and/or C. dichotoma and C. brevipes.

The C. O. Levine s.n. [Herb. Canton Chr. Coll. 743], distributed as C. dichotoma, is actually C. randaiensis Hayata.

CALLICARPA DICHOTOMA f. ALBIFRUCTA Moldenke

Additional bibliography: Moldenke, Phytologia 14: 170 (1966) and 21: 152. 1971.

Additional citations: CULTIVATED: Japan: Togasi 1667 (Go—istype).

CALLICARPA DOLICHOPHYLLA Merr.

Additional synonymy: Callicarpa caudata var. γ H. J. Lam, Verbenac. Malay. Arch. 61. 1919.

Additional & emended bibliography: E. D. Merr., Philip. Journ. Sci. Bot. 12: 108, 301, & 382. 1917; Moldenke, Phytologia 21: 36, 104, 107, 108, 212, & 213. 1971.

CALLICARPA ERIOCLONA Schau.

Additional bibliography: Elm., Leaflet. Philip. Bot. 10: 3860. 1939; Kaneh. & Hatus., Bot. Mag. Tokyo 56: 113. 1942; Moldenke, Phytologia 21: 151, 152, 215, & 223. 1971

CALLICARPA ERYTHROSTICTA Merr. & Chun

Additional bibliography: E. J. Salisb., Ind. Kew. Suppl. 11: 40. 1953; Moldenke, Phytologia 21: 37. 1971

CALLICARPA FERRUGINEA Sw.

Additional bibliography: Ainslie, Mat. Ind. 2: 181. 1826; Moldenke, Phytologia 21: 152--153. 1971.

CALLICARPA FORMOSANA Rolfe

Additional & emended bibliography: Elm., Leaflet. Philip. Bot. 6: 1926 & 2090. 1913; E. D. Merr., Philip. Journ. Sci. Bot. 12: 382. 1917; T. Itô, Taiwan Shokubutu Dzusetu [Illustr. Formos. Pl.] 603. 1927; Elm., Leaflet. Philip. Bot. 9: 3135 (1934) and 10: 3860. 1939; Moldenke, Phytologia 21: 153, 164, & 236. 1971.

Emended illustrations: T. Itô, Taiwan Shokubutu Dzusetu [Illustr. Formos. Pl.] 603. 1927.

CALLICARPA FORMOSANA f. *ANGUSTATA* Moldenke

Additional bibliography: Moldenke, *Phytologia* 21: 36, 37, & 236. 1971.

The R. S. Williams 1158 collection, cited below, was erroneously cited by me in *Phytologia* 14: 143 (1966) as *C. caudata* Maxim.

Additional citations: PHILIPPINE ISLANDS: Luzon: R. S. Williams 1158 (N).

CALLICARPA FORMOSANA var. *GLABRESCENS* Moldenke

Additional bibliography: Moldenke, *Phytologia* 15: 26 (1967) and 21: 108. 1971.

The Ramos & Edaño s.n. [Herb. Philip. Bur. Sci. 49011], so listed by me in a previous publication, proves actually to be *C. phanerophlebia* Merr., while W. T. Tsang 850 [Herb. Lingnan Univ. 16349] is a cotype collection of *C. rubella* f. *robusta* P'ei.

CALLICARPA JAPONICA Thunb.

Additional & emended bibliography: Makins, *Ident. Trees & Shrubs* 74 & 258, fig. 62 G. 1936; Hara, *Enum. Sperm. Jap.* 1: 183 & 185. 1948; Li, *Morris Arb. Bull.* 14: 4-7, fig. 1-6. 1963; T. H. Everett, *Read. Dig. Compl. Book Gard.* 420. 1966; Moldenke, *Phytologia* 21: 154, 210, 212, & 240-242. 1971.

Additional illustrations: Makins, *Ident. Trees & Shrubs* 74, fig. 62 G. 1936.

CALLICARPA JAPONICA var. *LUXURIANS* Rehd.

Additional & emended bibliography: Nakai in Nakai & Koidz., *Trees & Shrubs Indig. Jap.*, ed. 2, 1: 454-455, 463, & 464, fig. 215 & 220. 1927; Hatus., *Journ. Jap. Bot.* 26: 372. 1951; Ohwi, *Fl. Jap.* 763, 764, & 998. 1965; Moldenke, *Phytologia* 20: 495 (1971) and 21: 35, 41, 44-45, 49, 102, & 103. 1971.

Additional & emended illustrations: Nakai in Nakai & Koidz., *Trees & Shrubs Indig. Jap.*, ed. 2, 1: 454, fig. 215 & 220. 1927; Nakai in Shirasawa, *Icon. Essenc. Forest. Jap.* 2: [Terasaki, *Zoku Nipp. Syokubutzhu*] fig. 2481. 1938.

CALLICARPA LINGII Merr.

Additional bibliography: A. W. Hill, *Ind. Kew. Suppl.* 8: 37. 1933; Moldenke, *Phytologia* 21: 47. 1971.

CALLICARPA LONGIFOLIA Lam.

Additional synonymy: *Callicarpa longifolia* var. *subglobata* Schau. ex Kaneh. & Hatus., *Bot. Mag. Tokyo* 56: 113, sphalm. 1942.

Additional & emended bibliography: Benth. in Hook., *Journ. Bot. & Kew Gard. Misc.* 5: 136. 1853; H. N. Ridl., *Journ. Straits Med. Assoc.* 5: 127. 1897; Ahmad, *Agric. Bull. Straits & Fed. Malay States* 6: 162. 1907; E. D. Merr., *Philip. Journ. Sci. Bot.*

12: 108 & 382. 1917; Nakai, Bot. Mag. Tokyo 36: 23. 1922; Janson., Mikrogr. Holzes Java 4: 774. 1928; Burkill & Haniff, Gard. Bull. Straits Settl. 6: 233. 1930; Gimlette & Burkill, Gard. Bull. Straits Settl. 6: 354, 387, 388, & 394. 1930; Elm., Leaflet. Philip. Bot. 10: 3860. 1939; Hatus., Journ. Jap. Bot. 24: 81. 1949; Burkill, Dict. Econ. Prod. Malay Penins. 1: 407—408. 1966; Corner & Watanabe, Illustr. Guide Trop. Pl. 752. 1969; Vidal & Lemoine, Journ. Agr. Trop. & Bot. Appl. 17: 28—29. 1970; Moldenke, Phytologia 21: 155—162, 164, 210—215, 223—225, 234, & 235. 1971.

Additional illustrations: Corner & Watanabe, Illustr. Guide Trop. Pl. 752. 1969.

Vidal & Lemoine (1970) record the common name "ntoo peeb lab soob" for this plant, cite Lemoine 24 & 106 from Laos, and comment that it is an "Arbre de forêt claire ou de forêt secondaire à fruits charnus violets, non comestibles. Les feuilles sont appliquées sur les blessures".

Burkill (1966) lists the following vernacular names for this plant: "tampang bēsi" ("tulang bēsi" is an error for this), "tampang bēsi puteh" (=white-fruited tampang bēsi), "tampung bēsi", "tampoh bēsi", "tampah bēsi", "tampal bēsi", "tapah bēsi", "sulap", "karat bēsi", "chapal", "chapul kēchil", "nasi-nasi"; in Java "mēniran uban", "mēniran sapi", "gambiran", "songka", "songka kampong"; in Sundanese "katumpang"; in Sumatra "sētampo", "bēbētih kinana"; in Bangka "nasi-nasi"; in Thailand "khow tok". He notes, further, that the plant is "A shrub found throughout Malaysia and to Australia; in the Peninsula it is common. It is one of the chief plants used for poulticing by the Malays, and is also administered internally. For colic a decoction of the leaves is drunk.....This use extends to Java and through to the Moluccas. A similar decoction is given after childbirth, and for fever. For syphilis an infusion of the root is used.....and Rumpf says a decoction of the roots is useful for diarrhoea. The 'Medical Book of Malayan Medicine'.....seems to put this into the first place as a means of treating sprue, prescribing, as a draught, an infusion of the root, a gargle prepared by infusion of the leaves, and a mouth-wash prepared by infusing the bark. A decoction of the root of some species of Callicarpa, such as this, is prescribed,.....for distension of the stomach, the treatment comprising bathing the body by a decoction of the leaves. The leaves are used by the Malays for poulticing in fever, and for rubbing over the body and are applied to swellings. A lotion containing the juice of the root is used for nasal caries....The leaves are said to stupefy fish.....The wood burns steadily and thoroughly, whence the common Javanese name; it will not make charcoal. Jansonnus has described the minute structure...."

Dop (1932) states that C. longifolia is similar to C. petelotii Dop in the form of its leaves and the dimensions and disposition of the cymes and that the latter may possibly represent a natural hybrid between C. longifolia and C. dichotoma (Lour.) K. Koch and/or C. brevipes (Benth.) Hance.

CALLICARPA LONGIPETIOLATA Merr.

Additional bibliography: E. D. Merr., Philip. Journ. Sci. Bot. 12: 299--300. 1917; Moldenke, Phytologia 21: 208--210. 1971.

Merrill (1917) states that C. subintegra Merr. is allied to C. longipetiolata "from which it is at once distinguished by its differently shaped, narrow, caudate-acuminate leaves".

CALLICARPA LONGISSIMA (Hemsl.) Merr.

Additional & emended bibliography: E. D. Merr., Philip. Journ. Sci. Bot. 12: 108 & 382. 1917; Hatus., Journ. Jap. Bot. 24: 81. 1949; Moldenke, Phytologia 21: 210--214. 1971.

CALLICARPA MACROPHYLLA Vahl

Additional & emended bibliography: Dennst., Schlüss. Hort. Malab. 16 & 30. 1818; Ainslie, Mat. Ind. 2: 181. 1826; Benth. in Hook., Journ. Bot. & Kew Gard. Misc. 5: 135. 1853; Bodding, Mem. Asiat. Soc. Beng. 10: 245. 1927; Jain & Tarafder, Econ. Bot. 24: 247. 1970; Farnsworth, Pharmacog. Titles 6 (1): iii & item 1370. 1971; Moldenke, Phytologia 21: 214--227. 1971.

CALLICARPA MAINGAYI King & Gamble

Additional synonymy: Callicarpa lanata Ridl. ex Burkill, Dict. Econ. Prod. Malay Penins. 1: 408, in syn. 1966 [not C. lanata Gamble, 1893, nor Hosséus, 1912, nor "L. sensu Gamble", 1971, nor L., 1767, nor H. J. Lam, 1940, nor Lam., 1821, nor Roxb., 1966, nor Schau., 1870, nor Vahl, 1847, nor Wall., 1883, nor Walp., 1921, nor Zipp., 1841].

Additional bibliography: H. N. Ridl., Journ. Roy. Asiat. Soc. Straits Br. 30: 79. 1897; Elm., Leaflet. Philip. Bot. 10: 3860. 1939; Burkill, Dict. Econ. Prod. Malay Penins. 1: 408. 1966; Moldenke, Phytologia 21: 229--231. 1971.

The C. lanata accredited to Gamble, referred to in the synonymy above, is actually a synonym of C. vestita Wall., that credited to Hosséus is C. arborea Roxb., that credited to H. J. Lam is C. arborea var. psilocalyx (H. J. Lam) Moldenke, that credited to Lamarck is Premna tomentosa Willd., that credited to Schauer, to Vahl, to Walpers, and to Zippelius is C. pedunculata R. Br., and that credited to Linnaeus, to "Linnaeus sensu Gamble", to Wallich, and to Roxburgh belongs in the synonymy of C. tomentosa (L.) Murr.

Burkill (1966) refers to C. maingayi as follows: "A tree, confined to the Malay Peninsula, in Pahang, Selangor, and Malacca. Alvins says that the wood can be used for making fiddles, adding that there are two kinds of it, one with red and one with white bark. The bark on the younger branches is rusty red. Alvins says that the bark is used as a substitute for betel." He lists the common names "tampang bësi", "mëndapor", "tutok puteh" ["tulo" and "tutor" are errors for this], "chulak", "balek angin laut" [in reference to the white color of the lower leaf-surface].

CALLICARPA MERRILLII Moldenke

Additional bibliography: E. D. Merr., Philip. Journ. Sci. 30:

87. 1926; Moldenke, Phytologia 21: 233--235. 1971.

CALLICARPA MOLLIS Sieb. & Zucc., Abh. Akad. Muench. 4 (3) [Fl. Jap. Fam. Nat. 2]: 155--156. 1846.

Additional & emended bibliography: Sieb. & Zucc., Abh. Akad. Muench. 4 (3) [Fl. Jap. Fam. Nat. 2]: 155--156. 1846; Nakai, Journ. Jap. Bot. 14: 641. 1938; Moldenke, Phytologia 21: 237--242. 1971.

This binomial is sometimes erroneously cited to "Sieb. & Zucc., Fl. Jap. Fam. Nat. 526. 1844" — "526" is the species (not page) number in this work.

Additional citations: JAPAN: Honshu: Furuse s.n. [13 Oct. 1957] (S); Herb. Mus. Bot. Stockholm s.n. [Musasi, 1/10/1911] (S, S); Hiroe 7184 (Ca--939530); Hurusawa 34a (W--2073730); Inokuma 11 (Bi), 68 (Bi); Kinashi s.n. [Kyoto, 8.VI.1921] (Mi); Kitamura s.n. [Hondo, 28.VI.1931] (Mi, Mi); Kobayashi 13617 (S), 13938 (S), 15903 (Go); Maruyama & Okamoto 1617 (Go, N, S, Se--199277, W--2335110, Ws); Y. Matsumura 1669 (N), 4951 (N), 6673 (N); Maximowicz s.n. [Yokohama, 1862] (Bz--18100, S, T, W--9974, W--2496751); Mizushima 2927 (S), 3121 (S), 17169 (S); Murata 16428 (W--2409699); Okamoto 37 (Ws); S. Suzuki SI.55 (W--2214941), UC.93 [Herb. Suzuki 369002] (Ca--793587), UC.754 [Herb. Suzuki 437010] (Ca--930479), UC.784 [Herb. Suzuki 440027] (Ca--930516), UC.990 [Herb. Suzuki 463017] (Ca--953861), s.n. [Jun. 26, 1951] (Se--138339), s.n. [Jul. 10, 1951] (Se--138257), s.n. [Oct. 27, 1951] (Se--149640); Tagawa 195 (Ws); Thörn 25 (Go); Togasi 379 (Ca--955797, Go, Mg, Mi, N, S, S, Se--147223, Vi, W--2242153), 1255 (B, Ca--87159, Go, Mg, N, S, S, Se--177804, W--2276612, Ws, Ws); K. Uno 18448 (Ba), 18450 (N); Yamada s.n. [Ise, 20 juin 1910] (W--1178282). Kyushu: Herb. Sci. Coll. Imp. Univ. s.n. [July] (Vt); Hurusawa 34b (W--2073731); Kanehira s.n. [Mt. Seburi, Jun. 9, 1929] (W--1529231); Masamune s.n. [Satsuma, May 20, 1923] (N); Maximowicz s.n. [Nagasaki, 1863] (C); Oldham 620 (M, T), 621 (S); S. Suzuki 791 (Ws); Takenouchi s.n. [Ruzen, 7.X.1933] (Gg--267590). Miyajima: Hiroe 12036 (Ca--40384), 19038 (Ca--40399). Shikoku: Collector undetermined s.n. [Nanokawa, Tosa, June 21, 1892] (W--206169); Murata & Shimizu 1170 (Ws); Tagawa s.n. [Aug. 9, 1930] (Ws); Uyeki 74 (Vi); Watanabe s.n. [Takeyashiki, June 13, 1887] (Ca--363663); Yamozaki 34 (W--2073857). Sugashima: Kitamura s.n. [11 Nov. 1951] (Mi). Tsushima: Ohashi & Sohma 10017 (W--2594172); Wilford s.n. [1859] (S). Island undetermined: Herb. LeRoy s.n. (N); Herb. Lugd. Batav. s.n. (S); Herb. Umbach 22313 [Kogashiyama] (Ws); Siebold s.n. (M); Simada s.n. [Japan] (W--9964, W--9973); C. Wright s.n. [Simoda] (N--photo, N--photo, Os, T, Z--photo); Zollinger 350 (S). CULTIVATED: Java: Herb. Bogor. 18099 (Bz).

CALLICARPA MOLLIS var. *MICROPHYLLA* Sieb. & Zucc., Abh. Math.-phys. Kl. Kongl. Baierisch. Akad. Wiss. Muench. 4 (3): 156 [as "*microphylla*"]. 1846.

Synonymy: *Callicarpa japonica* var. *microphylla* Sieb. & Zucc. ex Moldenke, Résumé 172 & 444. 1959.

Bibliography: Sieb. & Zucc., Abh. Math.-phys. Kl. Kongl. Baierisch. Akad. Wiss. Muench. 4 (3) [Fl. Jap. Fam. Nat. 2]: 156. 1846; Sieb. & Zucc., Fl. Jap. Fam. Nat. Alt. 156. 1846; Miq., Ann. Mus. Bot. Lugd.-Bat. 2: 99. 1865; Miq., Cat. Mus. Bot. Lugd.-Bat. 70. 1870; Nakai, Trees & Shrubs Indig. Jap., ed. 1, 338. 1922; Nakai, Fl. Sylv. Kor. 14: 32--33 & 133. 1923; Nakai in Nakai & Koidz., Trees & Shrubs Indig. Japan, ed. 2, 1: 458. 1927; Masam., Prel. Rep. Veg. Yak. 115. 1929; Masam., Fl. & Geo. Yakus. 387. 1934; Moldenke, Prelim. Alph. List Invalid Names 12. 1940; Hara, Enum. Sperm. Jap. 1: 185. 1948; Moldenke, Phytologia 3: 295. 1950; Masam., Sci. Rep. Kamazawa Univ. 4: 46. 1955; Hara, Distrib. Maps Flow. Pl. Jap. 51. 1958; Moldenke, Résumé 172 & 444. 1959; Moldenke, Résumé Suppl. 15: 11 (1967) and 16: 17. 1968; Moldenke, Phytologia 21: 242. 1971.

The original description (1846) of this variety is "foliis lanceolatis vel ovato-lanceolatis acuminatis basi rotundatis dense et aequaliter serrulatis pollicaribus vel bipollicaribus. Die Behaarung und allgemeine Form der Blätter stimmt mit der *mollis* überein, nur sind dieselben viel kleiner und am Rande mit Ausnahme der Basis und Spitze gleichmässig feinsägezählig. Die Blüten sind an unseren Exemplaren nicht vollständig entwickelt." Nakai (1923) describes it as "Frutex 1--1.5 metralis ramosissimus. Folia 1--3 cm. longa. Nom. Jap. Kobano-yabumurasaki. Hab. in insula Hokitsutō. Distrib. Kiusiu." Masamune (1929, 1955) records it from Honshu and Kyushu, Japan, as well as from Yakushima in the Ryukiu Islands, and records the vernacular name "bagabayabu-murasaki".

According to Hara (1948) the "*C. mollis* var. *microphylla* Sieb. & Zucc." of Nakai (1922, 1923) is really *C. mollis* var. *ramosissima* Nakai.

It should be noted that Siebold & Zuccarini's reprint publication (1846) is often cited as "Fl. Jap. Fam. Nat. 2: 156" and Masamune's 1934 publication as "Masam. FY. 387". Miquel (1870) cites Siebold 3 [specimens?], Keiske 1 [specimen?], and Mohnike 1 [specimen?].

In some of my previous publications I did not accept the validity of this variety and reduced it to synonymy under typical *C. mollis* Sieb. & Zucc. However, recent Japanese workers, with field experience, regard it as a valid taxon and so I bow to their judgement. As yet I have seen no herbarium material of it.

CALLICARPA MOLLIS var. *RAMOSSISSIMA* Nakai in Nakai & Koidz., Trees & Shrubs Indig. Jap., ed. 2, 1: 458. 1927.

Synonymy: *Callicarpa japonica* var. *ramosissima* Nakai ex Moldenke, Résumé 172 & 444. 1959.

Bibliography: Nakai, Trees & Shrubs Indig. Jap., ed. 1, 338.

1922; Nakai, Fl. Sylv. Kor. 14: 32. 1923; Nakai in Nakai & Koidz., Trees & Shrubs Indig. Jap., ed. 2, 1: 458. 1927; Masam., Prel. Rep. Veg. Yak. 115. 1929; Masam., Fl. & Geo. Yakus. 387. 1934; Hara, Enum. Sperm. Jap. 1: 185. 1948; Moldenke, Phytologia 3: 295. 1950; Masam., Sci. Rep. Kanazawa Univ. 4: 46. 1955; Moldenke, Résumé 172 & 444. 1959; Moldenke, Résumé Suppl. 15: 11 (1967) and 16: 17. 1968.

According to Hara (1948) this taxon was erroneously reported as C. mollis var. microphylla Sieb. & Zucc. by Nakai in 1922 and 1923. He cites an illustration ["f. 2483 (1938)"], but unfortunately gives the name of the publication and its author only in Japanese characters.

Masamune (1955) records var. ramosissima from Honshu, Kyushu, and Sikoku, Japan, as well as from Yakushima in the Ryukiu Islands, and gives the vernacular name "kobano-yabumurasaki".

As yet I have seen no herbarium material of this taxon.

CALLICARPA NIGRESCENS Merr., Philip. Journ. Sci. 30: 425--426. 1926.

Bibliography: E. D. Merr., Philip. Journ. Sci. 30: 425--426. 1926; A. W. Hill, Ind. Kew. Suppl. 8: 37. 1933; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 62 & 87 (1942) and [ed. 2], 141 & 177. 1949; Moldenke, Phytologia 4: 124. 1952; Moldenke, Résumé 183, 198, & 444. 1959; Moldenke, Résumé Suppl. 15: 11. 1967; Moldenke, Phytologia 21: 109. 1971.

Merrill (1926) describes this plant as follows: "A shrub about 2 m high, the branches terete, older ones glabrous, the branchlets slender, densely and minutely stellate-furfuraceous or stellate-sublepidote, the indumentum brown or pale. Leaves opposite, membranaceous or subchartaceous, oblong to broadly oblong-lanceolate, 6 to 15 cm long, 3 to 6 cm wide, slenderly and sharply almost caudate-acuminate, base acute or decurrent-acuminate, margins crenate or crenate-dentate, the upper surface dark brown to black and shining when dry, entirely glabrous or with scattered stellate hairs when immature, the lower surface paler than the upper, minutely and rather densely pitted and with numerous shining glands, the indumentum of short, pale, stellate, scattered hairs, for the most part confined to the midrib and lateral nerves; lateral nerves about 7 on each side of the midrib, slender, curved-ascending, distinct; petioles 1 to 3 cm long, minutely and rather densely stellate-pubescent. Cymes axillary, mostly densely flowered, about as long as the petioles, the peduncles, branches, and calyces densely and minutely stellate-pubescent with pale or brownish hairs, the pedicels about 1.5 mm long, the bracteoles linear, 0.5 mm long. Calyx truncate, about 2 mm long, 1.5 mm in diameter, narrowed below to the cuneate base. Corolla tube 2 mm long, glabrous, the lobes 4, oblong-elliptic, rounded, glabrous or very slightly pubescent above, about 1.5 mm long. Filaments glabrous, 4 to 4.5 mm long; anthers oblong, 1.3 mm long. Style exserted, glabrous, 7 mm long. Fruit globose, glabrous, black when dry, about 2 mm in

diameter."

The type of the species was collected by Maximo Ramos and Gregorio E. Edaño [Philip. Bur. Sci. 44297] in secondary forests at low altitudes on Tawitawi, Sulu Archipelago, Philippine Islands, in August, 1924, and was deposited in the herbarium of the Philippine Bureau of Science at Manila, now unfortunately destroyed. Merrill cites also Philip. Bur. Sci. 44198, gathered by the same collector at the type locality in July of 1924. He comments that this is "A species rather well characterized within the genus by its very short indumentum, which is dense on the branchlets and inflorescences, and wanting or very sparse on the vegetative parts. The leaves are characteristically black or dark colored on the upper surface when dry, as in Callicarpa cana Linn. and C. bicolor Juss., and the species is apparently allied to these in spite of the difference in indumentum. According to Bakhuizen's arrangement of the species, it would apparently fall near or with Callicarpa japonica Thunb. and C. longifolia Lam., to neither of which can it be properly referred. I doubt very much if any of the Philippine or Malaysian material is properly referable to Thunberg's species."

Recent collectors describe this plant as 2 m. tall, the stems 3 cm. in diameter, the corollas bluish-pink, stamens yellow, and fruit green (in August), growing in secondary forests at low altitudes.

In all, 7 herbarium specimens, including material of the type collection, have been examined by me.

Citations: PHILIPPINE ISLANDS: Sulu: Wilkes Exped. s.n. [Sulu Archipelago] (W--40650). Tawitawi: Ramos & Edaño s.n. [Herb. Philip. Bur. Sci. 44198] (B, Bz--17292, Ca--257331, N), s.n. [Herb. Philip. Bur. Sci. 44297] (N--isotype). MOLUCCA ISLANDS: Sanana: Bloembergen 4336 (Bz--18056).

CALLICARPA NIPENSIS Britton & P. Wils. in N. L. Britton, Mem. Torrey Bot. Club 16: 98. 1920.

Synonymy: Callicarpa nipense Britton & P. Wils. ex Moldenke, Alph. List Cit. 1: 187, sphalm. 1946.

Bibliography: N. L. Britton, Mem. Torrey Bot. Club 16: 98. 1920; J. A. Clark, Card Ind. Gen. Sp. Pl. 1920; A. W. Hill, Ind. Kew. Suppl. 6: 34. 1926; Moldenke in Fedde, Repert. Spec. Nov. 39: 298 (1936) and 40: 56, 73--80, 119, 123, & 129. 1936; Moldenke, Geogr. Distrib. Avicenn. 5. 1939; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 24 & 87. 1942; Moldenke, Alph. List Cit. 1: 187 & 312 (1946) and 3: 929. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 42 & 177. 1949; Alain in León & Alain, Fl. Cuba 4: 305 & 307. 1957; Moldenke, Résumé 50 & 444. 1959; Moldenke, Phytologia 14: 155. 1966.

The Alain & Lopez Figueiras 4848, distributed as C. nipensis, is actually C. cuneifolia Britton & P. Wils.

In all, 5 herbarium specimens, including the type, and 5 mounted photographs of this species have been examined by me.

Emended citations: CUBA: Oriente: Shafer 3026 (F—286168—
isotype).

CALLICARPA NUDIFLORA Hook. & Arn., Bot. Beech. Voy. 206, pl. 46.
1836.

Synonymy: Callicarpa acuminata Roxb., Hort. Beng. [10], hyponym. 1814; Fl. Ind., ed. 1 [Carey & Wall.], 1: 408—409. 1820 [not C. acuminata Humb., 1825, nor Humb. & Bonpl., 1821, nor H.B.K., 1817, nor Humb. & Kunth, 1839, nor Kunth, 1847]. Callicarpa reevesii Wall., Numer. List 50, hyponym. 1829. Callicarpa nudiflora Hook. ex Pritz., Icon. Bot. Ind. 1: 188. 1866. Callicarpa macrophylla var. sinensis C. B. Clarke in Hook. f., Fl. Brit. Ind. 4: 568. 1885. Callicarpa reewvesii Wall. ex Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 166, sphalm. 1895. Callicarpa reveesii Wall. apud Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 22, sphalm. 1921. Callicarpa acuminata var. angustifolia Metc., Lingn. Sci. Journ. 11: 407. 1932. Callicarpa revesii Wall. apud P'ei, Mem. Sci. Soc. China 1 (3): [Verbenac. China] 19, sphalm. 1932. Callicarpa reveesi Wall. ex Moldenke, Résumé 246, in syn. 1959. Callicarpa macrophylla var. acuminata (Roxb.) Bakh., in herb. Callicarpa reversii Wall., in herb.

Bibliography: Roxb., Hort. Beng. [10]. 1814; Wall. in Roxb., Fl. Ind., ed. 1 [Carey & Wall.], 1: 408—409 & 481. 1820; Spreng. in L., Syst. Veg., ed. 16, 1: 420. 1825; J. A. & J. H. Schultes, Mant. 3: 53. 1827; Spreng. in L., Syst. Veg., ed. 16, 5: 126. 1828; Wall., Numer. List 50. 1829; Roxb., Fl. Ind., ed. 2 [Carey], 1: 394 & 395. 1832; Hook. & Arn., Bot. Beech. Voy. 206, pl. 46. 1836; Boj., Hort. Maurit. 258. 1837; D. Dietr., Syn. Pl. 1: 428. 1839; Steud., Nom. Bot., ed. 2, 1: 257. 1840; Walp., Nov. Act. Nat. Cur. 19, Suppl. 1: 381. 1843; Walp., Repert. Bot. Syst. 4: 125—126. 1845; Schau. in A. DC., Prodr. 11: 641 & 642. 1847; Benth. in Hook., Journ. Bot. & Kew Gard. Misc. 5: 135. 1853; Miq., Fl. Ned. Ind. 2: 888. 1856; Benth., Fl. Hongk. 270. 1861; Pritz., Icon. Bot. Ind. 1: 188. 1866; Roxb., Fl. Ind., ed. 3 [C. B. Clarke], 132. 1874; C. B. Clarke in Hook. f., Fl. Brit. Ind. 4: 568. 1885; Maxim., Bull. Acad. Sci. St. Pétersb. 31: 75. 1886; Maxim., Mém. Biol. 12: 504 & 505. 1886; Forbes & Hemsl., Journ. Linn. Soc. Lond. Bot. 26: 254—255. 1890; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 386. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 166. 1895; H. N. Ridl., Journ. Roy. Asiat. Soc. Straits 33: [Fl. Singap.] 122. 1900; King & Gamble, Journ. Roy. Asiat. Soc. Beng. 74 (2), extra no., 802 & 805—806. 1908; King & Gamble, Mat. Fl. Malay. Penins. 21: 1012 & 1015—1016. 1909; Dunn & Tutchet, Kew Bull. Misc. Inf. Addit. Ser. 10: 202. 1912; H. J. Lam, Verbenac. Malay. Arch. 48, 65, & 89. 1919; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 10 & 22. 1921; H. N. Ridl., Fl. Malay Penins. 2: 617. 1923; Chung, Mem. Sci. Soc. China 1 (1): 226. 1924; E. D. Merr., Lingn. Sci. Journ. 5: 157. 1927; Stapf, Ind. Lond. 1: 526. 1929; Moldenke,

Bull. Torrey Bot. Club 60: 55--56. 1932; P. Dop, Bull. Soc. Hist. Nat. Toulouse 64: 500, 503, 511, & 512. 1932; Metc., Lingn. Sci. Journ. 11: 407. 1932; P'ei, Mem. Sci. Soc. China 1 (3): [Verbenac. China] 14, 16, 19, & 42--44. 1932; H. F. MacMillan, Trop. Plant. & Gard., ed. 4, 104. 1935; L. H. Bailey, List Florists Handl. Verbenac. mss. 1935; Moldenke in Fedde, Repert. Spec. Nov. 39: 302 (1936) and 40: 39, 41, 106, 113--115, 120--122, 124, 127, & 128. 1936; A. W. Hill, Ind. Kew. Suppl. 9: 45. 1938; Moldenke, Geogr. Distrib. Avicenn. 36. 1939; Moldenke, Prelim. Alph. List Invalid Names 9 & 12. 1940; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 54--56, 58, 59, 61, 71, & 87. 1942; Moldenke, Alph. List Invalid Names 8 & 10. 1942; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 1, 104. 1943; Moldenke, Phytologia 2: 85 & 95. 1945; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 386. 1946; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 2, 104. 1946; Moldenke, Alph. List Cit. 1: 21, 89, 91, 108, 271, & 298. 1946; Moldenke, Alph. List Invalid Names Suppl. 1: 3. 1947; H. N. & A. L. Moldenke, Pl. Life 2: 78. 1948; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 3, 104. 1948; Moldenke, Alph. List Cit. 2: 359, 402, 404, 410, 432, 580, 643, & 644 (1948), 3: 657, 658, 666, 770, 775, & 854 (1949), and 4: 1011, 1105, 1228, 1234, & 1297. 1949; Moldenke, Phytologia 3: 139. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 124, 125, 128, 129, 131, 134--136, 139, 157, & 177. 1949; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 4, 104. 1949; Moldenke, Revist. Sudam. Bot. 8: 172. 1950; H.-T. Chang, Act. Phytotax. Sin. 1: 270, 279, 283, 307, 308, & 311. 1951; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 5, 104. 1952; Moldenke, Phytologia 4: 124 (1952) and 4: 268. 1953; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 6, 104 (1954) and pr. 7, 104. 1956; Moldenke, Résumé 159, 160, 165, 166, 168, 173--175, 179, 214, 241, 245, 246, & 444. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 386. 1960; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, pr. 8, 104. 1962; Sen & Naskar, Bull. Bot. Surv. India 7: 38. 1965; Moldenke, Phytologia 13: 431 & 433 (1966) and 14: 38, 112, 114, 121, & 142. 1966; Burkill, Dict. Econ. Prod. Malay Penins. 1: 407. 1966; Moldenke, Résumé Suppl. 14: 3 & 4 (1966) and 15: 16. 1967; Tingle, Check List Hong Kong Pl. 38. 1967; Moldenke, Phytologia 14: 219 & 225 (1967) and 16: 384 & 447. 1968; Chan & Teo, Chem. Pharm. Bull. Tokyo 17: 1284--1286. 1969; Farnsworth, Pharmacog. Titles 5 (4): iii & item 4115. 1970; Moldenke, Phytologia 21: 35, 101, 114, 151, 223, & 225. 1971.

Illustrations: Hook. & Arn., Bot. Beech. Voy. pl. 46. 1836.

As has been pointed out by me in 1932, the Asiatic plant for so long a time known as C. acuminata Roxb. must take on another name. While this binomial was actually first proposed by Roxburgh in 1814, it was not accompanied by any description. It was, therefore, a mere hyponym, and is not considered to have been validly published at that time. A full description, validating the name, was not published by him until 1820. In the meantime, Humboldt, Bonpland, & Kunth published their C. acuminata in quite va-

lid form for a Mexican, Central and South American species in 1817 with a full description. The Asiatic and American plants are similar in appearance, but are not conspecific. The American plant, therefore, must retain the name C. acuminata H.B.K. and the Asiatic plant must take on a new name.

The second oldest name for the Asiatic plant is C. reevesii Wall., proposed in 1829, but also as a hyponym. It was not validly published until by Walpers in 1845. In 1836, however, Hooker & Arnott published C. nudiflora, accompanied by a good description and illustration. It seems obvious, therefore, that the Asiatic plant first known as C. acuminata Roxb., then as C. reevesii Wall., must now be known as C. nudiflora Hook. & Arn. It has been collected rather extensively in southern China, Canton, Kwangtung, Hainan Island, Macao, and Lappas Island, and occurs also in Silhet, Tenasserim, and Singapore.

Roxburgh's original (1820) description of his C. acuminata is "Shrubby, tender parts hoary with a stellate pubescence. Leaves broad-lanceolar, acuminate, remotely repand, denticulate. Panicles axillary, long peduncled, dichotomous, shorter than the leaves. A native of Silhet, flowers in May. In this species the panicles are elevated on longer peduncles than in the other species [of India], the leaves and young parts very hairy, except the upper surface of the former when fully expanded, which is then naked and reticulate; from four to five inches long by nearly two broad."

King & Gamble (1908) amplified this description as follows: "A shrub, the branches, petioles, the under surface of leaves, and inflorescence covered with a soft, whitish-grey or pale tawny, mealy tomentum of branched or stellate hairs. Leaves coriaceous; lanceolate or elliptic-lanceolate, long acute at apex, attenuate at base and often slightly unequal, not decurrent; upper surface dark when dry, glabrous except the nerves, lower tomentose; margins entire for the lower third, above that shortly dentate serrate; 5 to 8 in. long, 2 to 3 in. broad; midrib stout; main nerves 13 to 15 pairs, nearly regular, starting at an angle of 45° to 60° with the midrib and curving gently to the margin, each pair joined by rather obscure transverse nervelets, all slightly impressed above; petiole .75 in. long. Cymes axillary, rounded, many-flowered, widely dichotomous, reaching 4 in. long and about 3 in. broad; peduncles 1.5 to 2 in. long; bracts linear subulate, 1 in. long; pedicels short, slender, nearly glabrous, .05 to .1 in. long; flowers purple? Calyx very short, nearly glabrous but with a few stellate hairs and minutely glandular-punctate, very shortly 4-toothed. Corolla twice as long as calyx .1 in.; lobes rounded, sparsely stellate-pubescent and glandular-punctate. Stamens long exsert; filaments slender; anthers small; the connective glandular-punctate. Ovary rounded, very glandular; style very long, twisted; stigma peltate, large. Drupe purple, small, .075 to .1 in. in diam., nearly globose; pyrenes 4.....Singapore: near the Botanic Gardens, Murton 87; Ridley 6884 cult! Distrib. Tenasserim (?) (Falconer); Southern China."

Bakhuizen van den Brink (1921) gives the distribution of this species as "S.-China! Canton! Lappas-Isl.! Kwantung! Hongkong! Hainan! Macao! Silhet! ? Tenasserim! ? Singapore!"

Recent collectors describe the plant as a low woody shrub, 1--3 m. tall, or sometimes a small to large tree, to 9 m. tall, erect, the stems 15--25 cm. in diameter, bark brown and flaky, branches pale furfuraceous, becoming gray-green, the leaves "yellow-green" or green, pale- or deep-green above, pale-green or grayish mealy-tomentose beneath (or "light-green above, tawny beneath"), "with prominent glaucous vein" beneath, the flowers fragrant or ill-smelling, the stamens purple, the immature fruit green, maturing to red (Chun & Tso 44714, Tsang s.n., Wang 35446), lilac (Chun 6846), purple-red (Liang 63254), purple, or blue; "green to white" on Liang 66369 and "brown" on Chun 40422 & Lei 125. The corolla is described as being "red" on W. T. Tsang 29, "pink" on Fung 20276, Liang 62117, and Taam 1560, "rose" on Bodinier 798, "pale pink-purple" on Clemens & Clemens 3148, "peach-red" on Lei 914, "purple-pink" on Clemens & Clemens 3936, "violet" on Chun 3155, "purple" on Chun 2108, Tsang & Fung 461, and Wang 32788, and "white" on Ying 872.

Collectors have found the plant growing in loam soil or sand, in open thickets, mixed woods, forests, and gardens, on level land, slopes, open hillsides, rocky mountains, and forest margins, along open roadsides and streamsides, and in partial shade at the sides of ravines, at altitudes of 1200 feet, flowering in February and from April to September, fruiting from August to February. Tsang describes it as "abundant scattered shrubs in dry sandy soil", Lau says "fairly common, dry cliffs, sandy soil", and Lei reports "rare in loam of dry level land", "scattered shrubs in village greens", and "in roadside gardens". Bodinier reports it as "rare dans l'île" on Hongkong, while Chun found it to be "common" on Hainan Island.

It should be noted that Sprengel (1825) places Roxburgh's *C. acuminata* in the synonymy of *C. heynei* Roth [now known as *C. candicans* (Burm. f.) Hochr.]. The Hooker & Arnott 1836 reference in the bibliography of *C. nudiflora* is dated "1841" by Bakhuizen van den Brink (1921), Stapf (1929), and P'ei (1932), but actually was published in 1836 [see the dates of publication of the various pages of this work, as well as of the plates, under *C. kochiana* in these notes]. The Wallich 1829 reference is cited as "1828" by Bakhuizen van den Brink, who also cites the 1845 Walpers reference by the title-page date of "1844--1848". The King & Gamble publications, referred to above, are both often cited as "1909" and the pages reversed or the serial citation given as "74 (4)". Dr. Lam (1919) reduces Roxburgh's *C. acuminata* to synonymy under *C. longifolia* f. *floccosa* Schau.

The *Callicarpa acuminata* var. *angustifolia* of Metcalf (1932) seems to be merely a new name for *C. nudiflora* Hook. & Arn. as distinguished by him from *C. acuminata* Roxb. and *C. reevesii* Wall.

He cites for it a Ford s.n., originally determined as C. purpurea A. L. Juss. in the Arnold Arboretum herbarium. Callicarpa macrophylla var. sinensis C. B. Clarke is described by Clarke (1885) as having "Leaves oblong-lanceolate, closely denticulate, peduncles longer than the petioles, anthers oblong, larger. -- Canara; Gibson. Calcutta; Distrib. China. Branches upwards dense with leaves. Teeth of the leaves with minute black glandular spots. Calyx in flower stellately tomentose, soon nearly glabrate; teeth elongate, often somewhat longer than the tube. Probably a cultivated plant: it seems as near to C. Reevesii as to C. macrophylla! Chang (1951) compares it with C. nudiflora Hook. & Arn. and with C. lobo-apiculata Metc. My good friend, Dr. Santapau, in a letter to me dated February 16, 1948, says "Call. macrophylla var. sinensis is given as a Bombay plant on the word of Gibson, who found it in Kanara; unless we are told which Kanara is meant, we cannot draw any definite conclusion, although I am inclined to think it was the North Kanara [Bombay Pres.], in which Gibson did botanise extensively."

The Griffith 6040/1, cited below, was apparently taken from a cultivated plant in India, the seeds of which were "ex China". Sen & Naskar (1965) record the species as cultivated in India, Bojer (1837) says that it is cultivated in Mauritius. Bailey (1935) reports that it was offered to the horticultural trade at that time by the Singapore Botanical Garden. MacMillan (1943) includes it among the species cultivated in the tropics, calling it a "Large straggling sh.[rub] or small tree. L.[eaves] large, tomentose. Fls. pink, in large cymes. S. China."

Vernacular names reported for the species are "pan ko fa" "sai yeung paan kaau fa", and "tai chung lo kop muk".

Chang (1951) cites Fenzl 16, H. Green s.n., C. I. Lie 124 & 914, and nos. 29, 100, 461, 499, 872, 1178, 1560, 1720, 1835, 1929, 3155, 5287, 6848, 6958, 9649, 16596, 20276, 21842, 23679, 27043, 27748, 31232, 38863, 41422, 44714, 62117, 62473, 63254, 63303, 66369, 67201, 69122, 69899, 70134, 72814, & 72947 of collectors and/or herbaria whose names, unfortunately, he gives only in Chinese characters.

Under Genus 136, Callicarpa, in the Linnean Herbarium in London, sheet no. 2 is inscribed "tomentosa" in Linnaeus' handwriting and "cana" in Solander's writing. The specimen is neither C. tomentosa (L.) Murr. nor C. candicans (Burm. f.) Hochr. [the taxon which used to be called C. cana L.], but is plainly typical C. nudiflora Hook. & Arn.! Sheet no. 3 in the same folder, unidentified, is actually C. candicans.

Material of C. nudiflora has been misidentified and distributed in herbaria under the names C. macrophylla Vahl, C. purpurea A. L. Juss., C. tomentosa Willd., and Premna arborea Roth. On the other hand, the R. C. Ching 7291, distributed as C. nudiflora, is actu-

ally C. arborea Roxb., Barthe s.n. [1857] is C. candicans (Burm. f.) Hochr., Gaudichaud s.n. [Chine, juillet 1839] is C. formosana Rolfe, some of the Herb. Hort. Bot. Calcutt. s.n. distribution is C. pedunculata R. Br., and C. O. Levine s.n. [Herb. Canton Chr. Coll. 1449] is C. rubella Lindl.

In all, 131 herbarium specimens and 4 mounted photographs of C. nudiflora have been examined by me.

Additional citations: INDIA: State undetermined: Herb. Falconer s.n. (K). CHINA: Kwangsi: Steward & Cheo 876 (N); W. T. Tsang 21842 (S). Kwangtung: Chun 3155 (N), 6846 (N), 40422 (N, N); C. O. Levine 349 (Io), s.n. [Herb. Canton Chr. Coll. 349] (W—778666); Nevin s.n. [Canton] (Du—90912); Y. K. Wang 499 (Ca—347394), 1835 (Bz—17244, Ca—374143); Ying 872 (Ca—359004). Province undetermined: N. J. Andersson s.n. [China] (S); Henslow s.n. [1833] (K). CHINESE COASTAL ISLANDS: Hainan: W. Y. Chun 2108 [Herb. Univ. Nanking 7089] (Ca—243565), 5704 (Ca—243565); Chun & Tso 44714 (B, N, W—1675437); C. Ford s.n. [27.7.93] (W—456056), s.n. (N, N); H. Fung 20276 (B, Bz—18103, Ca—11531, N, W—1751091); How 72814 (Bz—18596); Katsumada 21951 (Ca—322499); Lau 1929 (N); Lei 125 (B, Ba, Bi, Bz—18102, Ca—612188, N), 914 (B, Ba, N); Liang 62117 (N), 62473 (La, N), 63254 (N), 63303 (Go, N), 66369 (N, W—1671535); Tak 29 [Herb. Lingnan Univ. 15528] (Ca—315768); W. T. Tsang 29 [Herb. Lingnan Univ. 15528] (N, S, W—1248846); Tsang & Fung 461 [Herb. Lingnan Univ. 17995] (N); C. Wang 32788 (N), 34262 (N, S), 35446 (Go, N). Honam: C. O. Levine s.n. [Herb. Canton Chr. Coll. 1125] (Ka—62836, W—874850, W—877418, W—1010300). Lantau: Taam 1720 (Ca—82283, N, W—2072583); Tak 107 [Herb. Lingnan Univ. 16596] (Ca—341928); W. T. Tsang 16596 (S), s.n. [Herb. Lingnan Univ. 16596] (N, W—1249639). HONGKONG: Bodinier 798 (W—2496755); W. Y. Chun 6846 (Ca—374071); Fortune 86 (S); Hom 28 [Herb. Lingnan Univ. 18453] (N); Taam 1560 (Ca—82728, N, W—2063769); C. Wright s.n. [Hong Kong] (T, W—44906). MACAO: Gaudichaud 83 (W—2496740). INDOCHINA: Annam: Clemens & Clemens 3148 (Ca—340791, N), 3936 (Ca—339371, M1, N, Ut—309a, W—1427746). Tonkin: Pételot 105 (N, W—1716988). BONIN ISLANDS: Island undetermined: C. Wright s.n. [Bonin Islands] (W—9976). CULTIVATED: Brazil: Bailey & Bailey 791 (Bi); J. Santoro s.n. [Herb. Inst. Agron. Est. S. Paulo 9292] (Be—37206, Ca—40306). India: Griffith 6040/1 (T); Herb. Hort. Bot. Calcutt. s.n. (Bz—18095, Ed, Mu—989). Java: Backer 33433 (Bz—18090, Bz—18091), 33434 (Bz—18092, Bz—18093); Bakhuizen van den Brink s.n. (Bz—25480); Herb. Hort. Bot. Bogor. XI.G.25 (Bz—25717, Bz—25718, Bz—26516, Bz, Bz, N), 25a (Bz, Bz, Bz), 26 (Bz—25719,

Bz—25720, Bz—26517, Bz—26591, Bz, N), 26a (Bz—25721), s.n. (Bz—18094); Pijl 637 (Bz—18089). LOCALITY OF COLLECTION UNDETERMINED: Herb. Linnaeus G.136, S.2 (Ls, Mi—photo, N—photo, N—photo, Z—photo); Jameson s.n. (Ed).

CALLICARPA OBLANCEOLATA Urb. in Fedde, Repert. Spec. Nov. 18: 119. 1922.

Synonymy: Callicarpa inopina Moldenke, Geogr. Distrib. Avicenn. 5, nom. nud. 1939.

Bibliography: Urb. in Fedde, Repert. Spec. Nov. 18: 119. 1922; J. A. Clark, Card Ind. Gen. Sp. Pl. 1922; Urb. in Fedde, Repert. Soec. Nov. 20: 345. 1924; A. W. Hill, Ind. Kew. Suppl. 7: 37. 1929; Moldenke in Fedde, Repert. Spec. Nov. 39: 301 (1936) and 40: 76—77, 119, & 123. 1936; Moldenke, Geogr. Distrib. Avicenn. 5. 1939; Moldenke, Prelim. Alph. List Invalid Names 11. 1940; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 24 & 87. 1942; Moldenke, Alph. List Invalid Names 9. 1942; Moldenke, Alph. List Cit. 1: 75, 76, & 185 (1946), 2: 569 & 649—651 (1948), and 4: 1079, 1080, 1094, 1157, 1158, & 1206. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 42 & 177. 1949; Alain in León & Alain, Fl. Cuba 4: 305 & 308, fig. 131. 1957; Moldenke, Résumé 50, 243, & 444. 1959; Moldenke, Phytologia 13: 497 (1966) and 14: 42. 1966.

Illustrations: Alain in León & Alain, Fl. Cuba 4: fig. 131. 1957.

Recent collectors refer to this plant as a shrub, 2—4 feet tall, growing in woods, open pine woods, and cutover scrubby pine-land on serpentine-limonite plateaus, as well as on wet savannas, at 800 m. altitude, flowering in April, July, November, and December, and fruiting in April, July, and December. Webster calls it "a rare shrub with purple berries"; actually the fruits are drupes. Marie-Victorin and his associates tell us that it grows with Anastrophia victorinii and in Pinus cubensis woods. The corollas are described as having been "pink" on R. A. Howard 5900, "pale, almost white" on Mrs. G. C. Bucher 100bb & 100v, "purple" on Mrs. G. C. Bucher 100g, 100u, 100w, & 100y, "pale lavender" on Mrs. G. C. Bucher 100 L, and "brighter lavender, almost purple" on her 100m.

Mrs. Bucher has provided me with a large series of specimens from the Moa region of Oriente, Cuba. For a time I was of the opinion that her no. 16, at least, was worthy of specific designation as C. inopina Moldenke, but her series of no. 100's contains examples of so many variations and intergradations that it seems to me now that all her collections had better be included in Urban's C. oblanceolata. A modified description, based on her no. 16, is as follows: "Shrub; branches slender, gray, densely farinaceous with gray or whitish furf, very much less so in age, obscurely tetragonal, somewhat flattened and ampliate at the nodes; nodes not annulate; principal internodes 1—3 cm. long or the uppermost more abbreviated; leaves decussate-opposite, abundant; petioles slender, 5—11 mm. long, grayish-farinaceous, obscurely and shal-

lowly canaliculate above, keeled beneath; leaf-blades coriaceous, gray-green above when mature, brunnescent above in drying when immature, sordid-grayish or -yellowish beneath both when immature and mature, narrowly elliptic, 2--4.7 cm. long, 8--17 mm. wide, blunt or subacute at the apex, entire and slightly revolute along the margins (occasionally strongly revolute toward the base on older leaves), minutely white-stellate above when immature, glabrescent and shiny in age, often sparsely impressed black-punctate toward the base above, acute at the base, very densely stellate-tomentellous or -farinaceous with very closely appressed whitish or yellowish furf beneath; midrib slender, impressed above, prominent beneath; secondaries very short, about 7 per side, ascending, arcuate toward the margins and there rather obscurely anastomosing beneath; veinlet reticulation sparse, indiscernible above, only the largest portions discernible beneath; inflorescence supra-axillary; cymes usually one pair at the termination of the year's growth, 2.5--3.5 cm. long, 1.5--2.5 cm. wide, many-flowered, several times dichotomous, densely yellowish-furfuraceous throughout; peduncles slender, about 1 cm. long, flattened; pedicels minute or obsolete; bractlets 1 mm. long or less, subulate, densely yellowish-furfuraceous; prophylla obsolete; calyx campanulate, firm, subtetragonal, about 2.5 mm. long and 2 mm. wide, sparsely granular-pulverulent outside, its rim subtruncate, minutely 4-apiculate; corolla small, hypocrateriform, its tube broadly infundibular, cylindric at the base, about 2 mm. long, broadly ampliate above, glabrous (or very sparsely granular-pulverulent at the apex outside), its limb 4-parted, the lobes broadly elliptic-lingulate, about 1.2 mm. long and wide, obtuse at the apex, sparsely granular-pulverulent outside; stamens 4, inserted about 0.5 mm. above the base of the corolla-tube; filaments filiform, to 3.5 mm. long, glabrous, one sometimes much shorter; anthers oblong, to 1.2 mm. long and 0.7 mm. wide, opening by longitudinal slits.

Mrs. Bucher's nos. 100a, 100b, 100e, & 100h have the leaf-blades decidedly pale beneath, 100i & 100j have them pale and with curled edges, 100m has them extra wide, 100k has them wide and also pale, 100q has them long and slender, 100y has all the edges of the leaf-blades revolute, 100s exhibits both large and small leaves on the same branches (it was collected in November, the rainy season), 100v has wide leaves said by the collector to be "very tan underneath, not gray", 100w has its leaf-blades sparsely dentate toward the apex and is said by the collector to have had "wider leaves and scattered flowers", 100r also shows the leaves decidedly toothed at the apex and of it the collector notes "These certainly look different -- wavy edges -- smaller flowers in more delicate arrangement", concerning 100c & 100d she says "All these leaves look different, more veined, rougher and wider", and concerning 100g she asks "and what of this leaf, under [side] not clean tan?" Clément 4122 has its leaf-blades all sharp-pointed at the apex, while León & Clément 23128 [July 1949] has relatively huge leaves and certainly does not look like C. oblancoolata at all!

[to be continued]



Moldenke, Harold N. 1971. "Additional materials toward a monograph of the genus *Callicarpa*. XVI." *Phytologia* 21(5), 328–348.

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