

14. CLERODENDRUM Linnaeus, Sp. Pl. 2: 637. 1753.

大青属 da qing shu

Shrubs or small trees, rarely subshrubs or herbs, erect or rarely climbing, deciduous or evergreen. Branchlets usually 4-angled when young. Leaves simple, opposite or rarely whorled. Inflorescences loosely cymose or capitate, in terminal or rarely axillary paniculate thyrses. Calyx campanulate or cup-shaped, ca. 5-dentate or deeply 5-lobed. Corolla with a slender tube; lobes 5, spreading. Stamens 4, ± exserted. Ovary 4-locular; ovules pendulous or laterally attached. Style with 2 acute stigmatic lobes. Fruiting calyx ± inflated. Fruit a drupe with 4 1-seeded pyrenes, sometimes separating into 2 2-loculed or 4 1-locular mericarps.

About 400 species: mostly tropical and subtropical, few in temperate Asia, Africa, and America; 34 species in China.

- 1a. Corolla tube 5 cm or longer; leaves in whorls of 3–5 1. *C. indicum*
 - 1b. Corolla tube less than 5 cm; leaves opposite, rarely in whorls of 3.
 - 2a. Calyx truncate or subtruncate at anthesis.
 - 3a. Subshrubs 0.3–0.5 m tall; leaf blade membranous; calyx ca. 2 mm; corolla tube ca. 5 mm, lobes ca. 5 mm 33. *C. subscaposum*
 - 3b. Shrubs 1–4 m tall; leaf blade papery; calyx ca. 5 mm; corolla tube ca. 7 mm, lobes 6–12 mm 34. *C. serratum*
 - 2b. Calyx 5-lobed or 5-dentate at anthesis.
 - 4a. Inflorescences 3–10-flowered.
 - 5a. Corolla tube equal or slightly longer than calyx; calyx lobes triangular-ovate to broadly ovate 10. *C. fortunatum*
 - 5b. Corolla tube much longer than calyx; calyx lobes triangular-lanceolate.
 - 6a. Leaf blade papery; inflorescences terminal; calyx deeply lobed, lobes ca. 1 cm, triangular-lanceolate 31. *C. griffithianum*
 - 6b. Leaf blade thick papery; inflorescences axillary or rarely subterminal; calyx dentate or subtruncate in fruit 32. *C. inerme*
 - 4b. Inflorescences more than 10-flowered.
 - 7a. Leaf blade abaxially with numerous peltate glands usually covered with a sand-colored secretion.
 - 8a. Leaf blade shallowly palmately 3–5-lobed 4. *C. paniculatum*
 - 8b. Leaf blade not lobed.
 - 9a. Stamens ca. 2 cm 2. *C. intermedium*
 - 9b. Stamens 4.5–7.5 cm 3. *C. japonicum*
 - 7b. Leaf blade abaxially with few or no peltate glands.
 - 10a. Leaf blade 2–3 × as long as wide.
 - 11a. Inflorescences capitate or flat-topped cymes with a short axis.
 - 12a. Leaf blade densely yellow glandular on both surfaces 11. *C. luteopunctatum*
 - 12b. Leaf blade without glands or glands only on 1 surface.
 - 13a. Inflorescences capitate, ca. 5.5 cm; calyx lobes lanceolate, reflexed at anthesis 12. *C. ervatamioides*
 - 13b. Inflorescences flat-topped, 7–16 cm; calyx lobes triangular-lanceolate, erect at anthesis.
 - 14a. Leaf blade papery; corolla tube ca. 1 cm; calyx 3–4 mm 13. *C. cyrtophyllum*
 - 14b. Leaf blade membranous; corolla tube 2–3 cm; calyx 6–7 mm 14. *C. kwangtungense*
 - 11b. Inflorescences thyrsoid with an elongated axis.
 - 15a. Branchlets 4-angled, winged 5. *C. wallichii*
 - 15b. Branchlets terete or slightly 4-angled, not winged.
 - 16a. Inflorescences more than 15 cm; leaf blade usually membranous 9. *C. longilimbum*
 - 16b. Inflorescences less than 15 cm; leaf blade usually papery.
 - 17a. Leaf pairs with unequal blades and petioles 6. *C. garrettianum*
 - 17b. Leaf pairs with equal blades and petioles.
 - 18a. Leaves black when dry; inflorescences slightly pendulous, racemously arranged thyrses; calyx lobes ovate-oblong 7. *C. henryi*
 - 18b. Leaves green when dry; inflorescences thyrsoid cymes; calyx lobes triangular-lanceolate 8. *C. hainanense*
- 10b. Leaf blade less than to 2 × as long as wide.
 - 19a. Cymes not crowded.
 - 20a. Inflorescences without a distinct axis.
 - 21a. Leaf blade adaxially sparsely pubescent to subglabrous, abaxially puberulent; calyx densely pubescent; corolla lobes without glands 24. *C. colebrookianum*
 - 21b. Leaf blade adaxially sparsely strigose, abaxially strigose only on veins; calyx puberulent; corolla lobes glandular outside 25. *C. kaichianum*
 - 20b. Inflorescences with a distinct axis.
 - 22a. Inflorescences rounded 26. *C. villosum*
 - 22b. Inflorescences flat topped.
 - 23a. Calyx 3–6 mm, teeth awl-shaped or narrowly triangular.

- 24a. Leaf blade papery, abaxially densely small glandular; calyx ca. 6 mm, teeth narrowly triangular 27. *C. kiangsiense*
- 24b. Leaf blade subleathery, abaxially without glands; calyx 3–4 mm, teeth awl-shaped 28. *C. mandarinorum*
- 23b. Calyx 11–15 mm, teeth ovate-elliptic or ovate.
- 25a. Branchlets, petioles, and peduncles densely tomentose and glandular; stamens equal to or slightly longer than corolla tube; style slightly longer than stamens 29. *C. brachystemon*
- 25b. Branchlets, petioles, and peduncles ± pubescent to subglabrous; stamens exerted; style shorter than stamens 30. *C. trichotomum*
- 19b. Cymes crowded.
- 26a. Inflorescences axillary.
- 27a. Leaf blade subglabrous; bracts deciduous in fruit 15. *C. peii*
- 27b. Leaf blade densely pubescent; bracts persistent in fruit 16. *C. bracteatum*
- 26b. Inflorescences terminal.
- 28a. Plants densely villous; calyx longer than fruit, without peltate glands 17. *C. canescens*
- 28b. Plants pilose or tomentose; calyx shorter than fruit, with peltate glands.
- 29a. Calyx and bracts pubescent with densely purplish red jointed glands 18. *C. tibetanum*
- 29b. Calyx and bracts pubescent but not as above.
- 30a. Calyx lobes linear-lanceolate or lanceolate.
- 31a. Corolla lobes elliptic to ovate, ca. 10 mm 19. *C. chinense*
- 31b. Corolla lobes obovate, 5–7 mm 20. *C. lindleyi*
- 30b. Calyx lobes narrowly triangular, triangular, triangular-lanceolate, or ovate-lanceolate.
- 32a. Corolla tube shorter than or equal to calyx; leaf blade adaxially strigose, abaxially densely yellowish brown pubescent especially on veins 21. *C. yunnanense*
- 32b. Corolla tube longer than calyx; leaf blade adaxially sparsely pubescent, abaxially sparsely glandular pubescent, subglabrous, or pubescent on veins.
- 33a. Bractlets lanceolate, ca. 1.8 cm; calyx 2–6 mm, lobes narrowly triangular to triangular, not longer than calyx tube 22. *C. bungei*
- 33b. Bractlets linear, 0.5–0.8 cm; calyx 10–15 mm, lobes triangular-lanceolate, longer than calyx tube 23. *C. confine*

1. *Clerodendrum indicum* (Linnaeus) Kuntze, Revis. Gen. Pl. 2: 506. 1891.

长管大青 chang guan da qing

Siphonanthus indica Linnaeus, Sp. Pl. 1: 109. 1753;
Clerodendrum siphonanthus R. Brown.

Subshrubs to shrubs 1–2 m tall. Branchlets purple to purplish, channeled, smooth. Leaves whorled with 3–5 per node or opposite, sessile or subsessile, with nodal hairs at petiole base; leaf blade narrowly lanceolate to oblong-lanceolate, 10–21 × 1.3–2.5 cm, membranous, glabrous, base attenuate, margin entire or sinuate, apex short acuminate; midvein prominent, veins 10–12 pairs. Inflorescences terminal leafy thyrses, 20–45 × 10–15 cm; cymes red, few flowered; peduncle to 3 cm; bracts linear-lanceolate to lanceolate, 1–2 cm; bractlets awl-shaped. Calyx 1–1.5 cm, divided 3/4 to base, densely minute round glandular; lobes ovate-lanceolate, 8–15 × 3–6 mm, apex acute. Corolla white, becoming cream colored; tube funnelform, curved, 5–9 cm; lobes spreading, lanceolate, elliptic, or ovate-oblong, 8–15 × 3–6 mm, apex obtuse. Stamens long exerted. Ovary glabrous. Style longer than stamens. Fruiting calyx crimson, to 3.8 cm in diam., leathery. Drupes dark blue, ca. 1.2 cm in diam., 2–4-lobed depending on number of pyrenes. Fl. and fr. Aug–Nov.

Roadsides on mountain slopes; 500–1000 m. Guangdong, Yunnan [Bhutan, Cambodia, India, Laos, Malaysia, Myanmar, Nepal, Thailand].

Medicinal, ornamental.

2. *Clerodendrum intermedium* Chamisso, Linnaea 7: 105 (typ. err. 150). 1832.

垦丁苦林盘 ken ding ku lin pan

Shrubs 1–2 m tall. Branches 4-angled. Leaf blade ovate, 8–20 cm, abaxially glandular dotted, base cordate, margin shallowly dentate, apex acuminate. Panicles terminal, bright red, to 25 cm. Flowers odorless. Corolla tube slender, ca. 1 cm; lobes oblong, subequal, spreading. Stamens red to purplish, ca. 2 cm, deflexed to recurved. Fruiting calyx enlarged, red, spreading to reflexed. Fruit blue, depressed globose, ca. 1 cm in diam.

300–500 m. S Taiwan [Indonesia, Philippines].

Specimens of this species have not been seen by the authors.

3. *Clerodendrum japonicum* (Thunberg) Sweet, Hort. Brit. 322. 1826.

??桐 cheng tong

Volkameria japonica Thunberg, Nova Acta Regiae Soc. Sci. Upsal. 3: 203. 1780; *Clerodendrum darrisii* H. Léveillé; *C. esquirolii* H. Léveillé; *C. japonicum* var. *album* P'ei; *C. kaempferi* (Jacquin) Siebold; *C. kaempferi* var. *album* (P'ei) Moldenke; *C. squamatum* Vahl; *Volkameria kaempferi* Jacquin.

Shrubs 1–4 m tall. Branchlets 4-angled, pubescent to subglabrous, nodes sometimes villous. Petiole 0.5–15(–27) cm, densely yellow-brown pubescent; leaf blade subcordate, 8–35 × 6–27 cm, sparsely pubescent, abaxially densely covered with numerous peltate glands often covered with a sand-colored secretion, base cordate, margin sparsely serrulate to dentate, apex acuminate to acute. Inflorescences terminal thyrses, 15–34 × 13–35 cm; bracts and bractlets usually reddish. Calyx red, 1–1.5 cm, deeply 5-lobed,

pubescent, outside sandy glandular; lobes ovate-lanceolate to ovate, 0.7–1.3 cm. Corolla white or red, tube 1.5–2.2 cm; lobes oblong, 1–1.5 cm. Stamens and style 3 × or more longer than corolla tube. Fruiting calyx much longer than fruit, becoming reflexed. Drupes green when young, blue-black at maturity, subglobose, 7–10 mm in diam. Fl. and fr. May–Nov.

Thickets in valleys, along streams, in grassy openings; 100–1200 m. Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangsu, S Jiangxi, Sichuan, Taiwan, Xizang, Yunnan, S Zhejiang [Bangladesh, Bhutan, India, Indonesia, Laos, Malaysia, Vietnam].

Medicinal, ornamental.

4. *Clerodendrum paniculatum* Linnaeus, Mant. Pl. 90. 1767.

圆齿大青 *yuan chi da qing*

Clerodendrum pyramidale Andrews; *Volkameria angulata* Loureiro.

Shrubs ca. 1 m tall. Branchlets 4-angled, subglabrous to pubescent, nodes villous. Leaves palmately lobed; petiole 3–11 cm, yellow-brown pubescent; leaf blade broadly ovate to subrounded, 5–17 × 7.5–19 cm, abaxially sparsely pubescent and sandy glandular, adaxially sparsely pubescent to subglabrous, base cordate, margin entire or minutely denticulate, apex acute. Inflorescences conical to rounded thyrses, 15–26 × 16–22 cm; peduncle long; bracts ovate-lanceolate to ovate; bractlets linear. Calyx ca. 7 mm, deeply 5-lobed, dotted; lobes usually lanceolate, ca. 5 mm. Corolla red to orange, tube 1–1.5 cm, dotted, outside pubescent, inside subglabrous; lobes oblong to ovate, spreading. Stamens and style 4 × as long as corolla tube. Drupes globose, 5–9 mm in diam. Fl. and fr. Apr–Feb.

Wet places; 100–500 m. Fujian, Guangdong, Taiwan [Bangladesh, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

5. *Clerodendrum wallichii* Merrill, J. Arnold Arbor. 33: 220. 1952.

垂茉莉 *chui mo li*

Clerodendrum nutans Wallich ex D. Don (1825), not Jack (1820).

Shrubs or small trees, 2–4 m tall, erect. Branchlets 4-angled, ± winged, glabrous. Petiole ca. 1 cm; leaf blade oblong to oblong-lanceolate, 11–18 × 2.5–4 cm, subleathery, glabrous, base narrowly cuneate, margin entire, apex acuminate to acute; veins 7 or 8 pairs, adaxially slightly distinct. Inflorescences pendent thyrses, 20–33 cm, glabrous, axis and peduncle 4-angled or winged; bracts small, linear to awl-shaped. Calyx red to purple, ca. 1 cm, tube very short; lobes ovate-lanceolate, 7–8 mm. Corolla white, tube ca. 1.1 cm; lobes ovate, 1.1–1.5 cm. Stamens and style exerted. Fruiting calyx red to purple, inflated, thickened. Drupes yellow-green when young, black and shiny at maturity, globose, 1–1.3 cm in diam. Fl. and fr. Oct–Apr.

Open forests on mountain slopes; 100–1200 m. SW Guangxi, Xizang, SW Yunnan [Bangladesh, India, Myanmar, Vietnam].

6. *Clerodendrum garrettianum* Craib, Bull. Misc. Inform. 1911: 444. 1911.

泰国垂茉莉 *tai guo chui mo li*

Shrubs 1–2 m tall, usually climbing; bark yellow-brown, gray-brown, or brown. Branchlets slender, pubescent when

young, glabrescent. Petiole 0.5–7 cm, unequally paired, pubescent; leaf blade oblong to elliptic, 4–17 × 2–7 cm, pairs usually unequal, thinly papery to papery, pubescent, base broadly cuneate to truncate, margin entire and ciliate, apex acuminate to short caudate; veins 5–7 pairs, midvein and lateral veins distinct. Panicles of thyrsoid cymes, 3.5–11 cm; bracts lanceolate, 0.5–2 cm, apex acuminate. Calyx ca. 0.7 mm, deeply 5-lobed, outside pubescent; lobes narrowly lanceolate, ca. 5 mm. Corolla greenish to yellowish greenish, outside pubescent; tube slender, ca. 1.5 cm; lobes 6–8 mm. Stamens and style exerted. Fruiting calyx slightly inflated, reflexed. Drupes red, globose, ca. 6 mm. Fl. and fr. Aug–Nov.

Dense forests on mountain slopes; 500–1100 m. S and SW Yunnan [Laos, Thailand].

7. *Clerodendrum henryi* P'ei, Mem. Sci. Soc. China 1(3): 152. 1932.

南垂茉莉 *nan chui mo li*

Shrubs 1.5–3 m tall. Branchlets slightly 4-angled when young, becoming terete, glabrous. Petiole 2–7 cm, glabrous; leaf blade ± black when dry, lanceolate, elliptic-lanceolate, or elliptic, 7–21 × 2–7 cm, papery, subglabrous, base cuneate to broadly cuneate, margin entire, slightly undulate, or irregularly dentate, apex acuminate to caudate; veins 7 or 8 pairs, abaxially prominent. Inflorescences racemously arranged thyrses, slightly pendulous, 9–15 cm; peduncle slender, glabrous; bracts linear, lanceolate, or elliptic-lanceolate, 0.5–1.7 cm. Calyx purplish, 6–9 mm, glabrous; lobes ovate-oblong, 4–6 mm. Corolla white, yellowish, or rarely purplish, tube 1–1.9 cm, outside puberulent; lobes ovate, 6–8 mm. Stamens and styles exerted. Fruiting calyx purple, enlarged. Drupes black, globose, 1–1.2 cm in diam. Fl. and fr. Sep–Jan.

• Forests on mountain slopes or along valleys; 700–1200 m. SW Yunnan.

8. *Clerodendrum hainanense* Handel-Mazzetti, Oesterr. Bot. Z. 80: 343. 1931.

海南??桐 *hai nan cheng tong*

Shrubs 1–4 m tall. Branchlets green, 4-angled, subglabrous to pubescent when young, becoming yellowish brown to gray, terete, and glabrous. Petiole 0.5–2.5 cm; leaf blade oblanceolate, narrowly elliptic, or obovate, 7–26 × 2–8 cm, membranous to papery, glabrous, abaxially densely small yellowish glandular, base narrowly cuneate to cuneate, margin entire, apex short caudate, veins 6–11 pairs. Inflorescences terminal, rarely axillary, lax thyrses, 8–14 cm, lateral cymes dichasial with peduncle to 3 cm; bracts linear to awl-shaped, 2–8 mm. Calyx pinkish to purple, ca. 5 mm; lobes triangular-lanceolate, ca. 4 mm. Corolla white, 0.5–4 cm, tube slender, outside puberulent and glandular; lobes obovate, 6–8 mm. Stamens long exerted. Ovary glabrous. Style longer than stamens. Fruiting calyx rotate, leathery. Drupes purple, globose, ca. 1 cm in diam. Fl. and fr. Sep–Dec.

• Forests on mountain slopes; 200–900 m. Guangxi, Hainan.

9. *Clerodendrum longilimum* P'ei, Mem. Sci. Soc. China 1(3): 151. 1932.

长叶大青 *chang ye da qing*

Shrubs 1–3 m tall. Branchlets 4-angled, glabrous. Petiole 2–6 cm; leaf blade elliptic, 2–20 × 4–8 cm, membranous,

subglabrous or adaxially sparsely puberulent, base broadly cuneate to rounded, margin entire or slightly undulate, apex acuminate; veins 7 or 8 pairs, abaxially distinct. Panicles terminal, narrow; peduncle slender; bracts linear to lanceolate, deciduous in fruit. Calyx campanulate, 7–9 mm, deeply 5-lobed, glabrous or sparsely puberulent; lobes oblong to elliptic, 4–6 mm. Corolla yellowish or white, tube 1.5–1.8 cm, outside puberulent and glandular; lobes spatulate, ca. 8 mm. Stamens and style long exerted. Fruiting calyx red, inflated. Drupes globose. Fl. and fr. Aug-Dec.

Dense forests on mountain slopes; 400–2400 m. W Guangxi, S Yunnan [Vietnam].

Allied to *Clerodendrum wallichii* but differs in having elliptic membranous leaf blades and corolla tubes 1.5–1.8 cm.

10. *Clerodendrum fortunatum* Linnaeus, Sp. Pl. ed. 2, 889. 1763.

白花灯笼 bai hua deng long

Clerodendrum castaneifolium Hooker & Arnott; *C. lividum* Lindley; *C. oxysepalum* Miquel; *C. pentagonum* Hance; *C. pumilum* (Loureiro) Sprengel; *Volkameria pumila* Loureiro.

Shrubs ca. 2.5 m tall. Branches densely yellow-brown pubescent when young; branchlets dark brown. Petiole 0.5–3(–4) cm, densely yellow-brown pubescent; leaf blade elliptic, ovate-lanceolate, or rarely ovate-elliptic, 5–17.5 × 1.5–5 cm, papery, abaxially pubescent and densely small yellow glandular, adaxially pubescent, base cuneate to broadly cuneate, margin entire, undulate, or sparsely dentate-serrate, apex acuminate. Cymes axillary, shorter than subtending leaves, 3–9(–18)-flowered; peduncle 1–4 cm, densely brown pubescent; bracts linear, densely brown pubescent. Calyx purple, deeply 5-lobed, outside pubescent, inside glabrous; lobes broadly ovate, forming 5 angles with their united edges. Corolla white or pinkish, salverform; tube straight, somewhat funnellform, slightly longer than calyx; limb oblique; lobes oblong, ca. 6 mm, reflexed. Stamens longer than corolla, declinate, inserted at ± middle of tube, base pubescent; anthers dark brown, sagittate, smooth. Style filiform, shorter than stamens. Fruiting calyx inflated. Drupes dark blue-green, subglobose, ca. 5 mm in diam., enclosed by calyx. Fl. and fr. Jun-Nov.

Mountain slopes along roadsides; 1000 m. Fujian, Guangdong, Guangxi, Jiangxi [Philippines, Vietnam].

Medicinal.

11. *Clerodendrum luteopunctatum* P'ei & S. L. Chen in P'ei, L. K. Fu, G. Y. Sheng, & T. D. Zhuang, Fl. Reipubl. Popularis Sin. 65(1): 212. 1982.

黄腺大青 huang xian da qing

Shrubs 2–4 m tall. Branchlets and stems with yellowish elliptic lenticels, densely rust colored pubescent. Petiole 1–5 cm, densely pubescent; leaf blade oblong-lanceolate, 7–15 × 2.5–5 cm, papery, pubescent especially on veins, densely yellow glandular, base broadly cuneate to rounded and rarely oblique, margin entire and ciliate, apex acuminate to caudate, veins 4–7 pairs, adaxially prominent. Inflorescences terminal corymbose cymes; bracts purple, lanceolate, 10–15 × 2–4 mm, apex acute, yellow glandular. Calyx red, campanulate, ca. 1.3 cm, submembranous, deeply 5-lobed, glandular; lobes lanceolate, ca. 9 mm. Corolla white, tube 2–2.5 cm; lobes

oblong, ca. 5 mm. Stamens exerted. Ovary glabrous. Style shorter than or equal to stamens. Drupes subglobose, ca. 6 mm in diam., enclosed in calyx. Fl. and fr. Jun-Oct.

• Thicket on mountain slopes and along roadsides; 600–1200 m. Guizhou, Hubei, Sichuan.

12. *Clerodendrum ervatamioides* C. Y. Wu, Fl. Yunnan. 1: 460. 1977.

狗牙大青 gou ya da qing

Shrubs 0.8–3 m tall, erect to climbing. Branchlets grayish brown to brown, 4-angled when young, becoming subterete, sparsely lenticellate, densely minutely hirsute to subglabrous. Petiole 0.5–1.6 cm, densely minutely hirsute; leaf blade oblong to elliptic, 5.5–12.5 cm, subleathery, adaxially subglabrous, base broadly cuneate to subrounded, margin entire or slightly undulate, apex caudate; veins 5 or 6 pairs, abaxially prominent. Cymes terminal, capitate, erect, ca. 5.5 cm; peduncle ca. 7 mm; bracts linear, 4–7 mm, densely minutely hirsute. Pedicel densely minutely hirsute. Calyx red, campanulate, 1–1.3 cm, outside sparsely minutely hirsute and glandular, inside glabrous and sparsely scaly glandular; lobes reflexed. Corolla white, ca. 3.3 cm, tube slender, outside glandular; lobes ovate-lanceolate, ca. 6 mm. Stamens exerted. Style longer than stamens. Fruiting calyx enlarged, thickened. Drupes subglobose, ca. 1 cm in diam. Fl. and fr. Apr-May.

• Mixed forests on mountain slopes; 100–700 m. Yunnan.

Allied to *Clerodendrum garrettianum* but differs in having shorter capitate inflorescences and longer corolla tube with shorter lobes.

13. *Clerodendrum cyrtophyllum* Turczaninow, Bull. Soc. Imp. Naturalistes Moscou 36(3): 222. 1863.

大青 da qing

Shrubs or small trees, 1–10 m tall. Branchlets yellow-brown, pubescent. Petiole 1–8 cm; leaf blade oblong, oblong-lanceolate, elliptic, or ovate-elliptic, 6–20 × 3–9 cm, papery, glabrous or sparsely pubescent along veins, abaxially glandular, base rounded to cuneate, margin entire or rounded serrate, apex acuminate to acute, veins 6–10 pairs. Inflorescences corymbose, formed from terminal and subterminal cymes, 7–16 × 8–25 cm; bracts linear, 3–7 mm. Flowers small, fragrant. Calyx yellow-brown, cup-shaped, 3–4 mm, outside minutely tomentose and glandular, inside glabrous; lobes ca. 1 mm. Corolla white, ca. 1 cm, tube slender, sparsely puberulent, glandular; lobes ovate, ca. 5 mm. Stamens and style exerted. Ovary glabrous. Fruiting calyx red. Drupes blue-purple, obovate to globose, 5–10 mm in diam. Fl. and fr. Jun-Feb.

500–1700 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hubei, Hunan, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [Korea, Malaysia, Vietnam].

- 1a. Leaf blade entire 13a. var. *cyrtophyllum*
1b. Leaf blade rounded serrate 13b. var. *kwangsiense*

13a. *Clerodendrum cyrtophyllum* var. *cyrtophyllum*

大青 da qing

Clerodendrum amplius Hance; *C. formosanum* Maximowicz; *Cordia venosa* Hemsley.

Leaf blade oblong, oblong-lanceolate, ovate-elliptic, or elliptic, margin entire, apex acuminate to acute. Inflorescences 10–16 × 20–25 cm. Fl. and fr. Jun-Feb.

Forests on mountain slopes or along streams; below 1700 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hubei, Hunan, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [Korea, Malaysia, Vietnam].

13b. *Clerodendrum cyrtophyllum* var. *kwangsiense* S. L. Chen & T. D. Zhuang in P'ei, L. K. Fu, G. Y. Sheng, & T. D. Zhuang, Fl. Reipubl. Popularis Sin. 65(1): 212. 1982.

广西大青 *guang xi da qing*

Leaf blade oblong, margin rounded serrate, apex obtuse. Inflorescences 7–12 × 8–15 cm.

- Thickets on mountain slopes; 500–1000 m. Guangxi.

14. *Clerodendrum kwangtungense* Handel-Mazzetti, Akad. Wiss. Wien, Math.-Naturwiss. Kl., Anz. 59: 111. 1922.

广东大青 *guang dong da qing*

Shrubs 2–3 m tall. Branchlets yellowish brown, pubescent. Petiole 1–4(–7) cm, slightly pubescent; leaf blade oblong to ovate, 6–18 × 2–7 cm, membranous, both surfaces glabrous except for pubescent veins, base broadly cuneate to subrounded, margin entire, irregularly serrate, or slightly undulate, apex acuminate to caudate, veins 4–6 pairs. Inflorescences erect, lax corymbose cymes, 7–12 × 8–15 cm, densely pubescent; bracts lanceolate to ovate-lanceolate, 0.8–1.2 cm; bractlets linear to lanceolate. Calyx 6–7 mm, tube as long as lobes, deeply 5-lobed, lobes lanceolate to triangular, outside sparsely puberulent. Corolla white, 2–3 cm, tube slender; lobes oblong, 4–5 mm. Stamens and style exerted. Fruiting calyx red, inflated. Drupes globose, 5–6 cm in diam. Fl. and fr. Aug–Nov.

- Forests, forest edges; 600–1300 m. N Guangdong, NE Guangxi, NE Guizhou, Hunan, Yunnan.

Medicinal.

15. *Clerodendrum peii* Moldenke, Geogr. Distr. Avicenn. 79. 1942.

长梗大青 *chang geng da qing*

Shrubs 1–3(–7) m tall. Branchlets 4-angled, densely yellowish brown pubescent when young, glabrescent. Petiole 6–11.5 cm, yellowish brown pubescent when young, glabrescent; leaf blade broadly ovate to cordate, 6–17.5 × 6.2–12.5 cm, when young both surfaces puberulent especially on veins and small glandular, glabrescent, with several large glands near base, base broadly cuneate, truncate, or cordate, margin entire or sparsely undulate, apex acuminate. Cymes axillary, capitate; bracts lanceolate to ovate-lanceolate, ca. 1.9 cm, puberulent, sparsely glandular, deciduous in fruit. Calyx cup-shaped, ca. 8 mm, outside pubescent and large glandular; lobes triangular, ca. 2 mm. Corolla white or pink, ca. 1.4 cm, tube funnelliform. Stamens and style exerted. Fruiting calyx red, ca. 6 mm, reflexed. Drupes green when young, blue-black at maturity, subglobose, 5–7 mm in diam. Fl. and fr. Jun–Oct.

- Forests along streams and roadsides; 1400–2400 m. S Yunnan.

16. *Clerodendrum bracteatum* Wallich ex Walpers, Repert. Bot. Syst. 4: 106. 1845.

苞花大青 *bao hua da qing*

Shrubs or small trees, 3–4(–10) m tall. Branchlets 4-angled, densely yellowish brown tomentose. Petiole 2.5–4.5 cm, densely pubescent; leaf blade ovate to broadly ovate, 11–

16 × 6–10 cm, abaxially densely villous, adaxially strigose-minutely hirsute, both surfaces yellow to orange glandular dotted, base broadly cuneate to subtruncate, margin entire or subentire, apex acuminate. Inflorescences axillary, cymelike capitula; peduncle 3.5–13 cm; bracts persistent, elliptic to ovate, 1–3 cm, apex acuminate to caudate, pubescent, glandular. Calyx red, ca. 1.6 cm, membranous, deeply 5-lobed, outside puberulent, with several small and large glands, inside glabrous; lobes ovate-lanceolate, ca. 1.1 cm, acuminate. Corolla white, 1.8–3.5 cm; tube slender, outside puberulent and glandular, inside glabrous; lobes oblong, 6–8 mm. Stamens equal or slightly longer than style. Drupes enclosed in calyx, green when young, purple-black at maturity, subglobose, ca. 6 mm in diam. Fl. and fr. Jul–Nov.

Bamboo or mixed forests on mountain slopes; 900–1900 m. NW Xizang, Yunnan [Bangladesh, Bhutan, India].

Allied to *Clerodendrum peii* but differs in having densely yellow-brown tomentose branchlets, petioles, and peduncles, persistent bracts, and stamens and styles as long as corolla.

17. *Clerodendrum canescens* Wallich ex Walpers, Repert. Bot. Syst. 4: 105. 1845.

灰毛大青 *hui mao da qing*

Clerodendrum haematocalyx Hance.

Shrubs 1–3.5 m tall; petioles and peduncles densely yellowish to brownish tomentose to nearly villous. Branchlets 4-angled. Petiole 1.5–12 cm; leaf blade broadly ovate or cordate, rarely ovate, 6–18 × 4–15 cm, villous especially on veins, base cordate to subtruncate, margin entire or sparsely mucronate-dentate, apex acuminate. Inflorescences terminal, subconical; peduncle robust, 1.5–11 cm; bracts leaflike, elliptic to ovate, 0.5–2.4 cm. Calyx green when young, ca. 1.3 cm, membranous, deeply 5-lobed, lobes ovate to broadly ovate. Corolla white or pinkish, outside puberulent; tube slender, ca. 2 cm; lobes obovate-oblong, 5–6 mm, reflexed. Stamens and style exerted. Fruiting calyx red. Drupes green when young, dark blue to black at maturity, subglobose, ca. 7 mm in diam. Fl. and fr. Apr–Oct.

Open forests on mountain slopes; 200–800 m. Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [India, Vietnam].

18. *Clerodendrum tibetanum* C. Y. Wu & S. K. Wu, Acta Phytotax. Sin. 16(4): 122. 1978.

西藏大青 *xi zang da qing*

Herbs 2–3 m tall. Branchlets gray-green, sparsely pubescent. Petiole 4–5 cm, densely rust colored pubescent; leaf blade elliptic, ca. 27 × 18 cm, 6–8 × 4–4.5 cm just below inflorescences, papery, abaxially densely pilose along veins, adaxially many-celled pilose, base broadly cuneate to subrounded, margin mucroserrulate and ciliate; veins 6–8 pairs, abaxially prominent. Inflorescences terminal, corymbose cymes, densely purplish red jointed glandular pubescent; bracts lanceolate, ca. 1.5 × 3 cm. Calyx ca. 1.3 cm, deeply 5-lobed; lobes linear-lanceolate, ca. 1 cm. Corolla purple, tube 1–2 cm; lobes elliptic, much shorter than tube, acute. Filaments compressed, glabrous. Ovary glabrous. Style shorter than stamens. Fl. and fr. Aug.

- Mixed forests on mountain slopes; 900 m. Xizang.

19. *Clerodendrum chinense* (Osbeck) Mabberley, Pl.-Book, repr. ed. 707. 1989.

重瓣臭茉莉 chong ban xiu mo li

Shrubs 0.5–1.2 m tall. Branchlets nearly 4-angled to terete, pubescent when young, glabrescent. Petiole 3–17 cm, pubescent to tomentose; leaf blade broadly ovate to subcordate, 9–22 × 8–21 cm, abaxially pubescent especially on veins and with several large glands near base, adaxially strigose, base truncate, broadly truncate, or subcordate, margin sparsely irregularly dentate, apex acuminate. Inflorescences terminal, dense corymbose cymes; peduncle tomentose; bracts lanceolate, 1.5–3 cm; pubescent, with several large glands. Flowers single or double, fragrant. Calyx 1.5–2.5 cm, deeply 5-lobed, pubescent, with several large glands; lobes linear-lanceolate or lanceolate, 0.7–1.6 cm. Corolla white, pinkish, or red, lobes elliptic or ovate.

• Wild in Guangxi, Guizhou, and Yunnan [cultivated in tropical and subtropical Asia].

- 1a. Flowers double; corolla lobes ovate 19a. var. *chinense*
1b. Flowers single; corolla lobes elliptic 19b. var. *simplex*

19a. *Clerodendrum chinense* var. *chinense*

重瓣臭茉莉 chong ban xiu mo li

Cryptanthus chinense Osbeck, Dagb. Ostind. Resa 215. 1757; *Clerodendrum fragrans* (Ventenat) Willdenow var. *multiplex* Sweet; *C. fragrans* var. *pleniflorum* Schauer; *C. philippinum* Schauer; *Volkameria fragrans* Ventenat.

Flowers double. Calyx 1.5–1.7 cm; lobes linear-lanceolate, 7–10 mm. Corolla red, pinkish, or white, lobes ovate.

• Cultivated in Fujian, Guangdong, Guangxi, Taiwan, and Yunnan [widely cultivated ornamental in tropical and subtropical Asia].

19b. *Clerodendrum chinense* var. *simplex* (Moldenke) S. L. Chen, Novon 1: 58. 1991.

臭茉莉 xiu mo li

Clerodendrum philippinum var. *simplex* Moldenke, Phytologia 20: 338. 1970.

Plants densely pubescent. Flowers simple. Calyx 1.5–2.5 cm; lobes lanceolate, 1–1.6 cm. Corolla white or pinkish, tube 2–3 cm; lobes elliptic, ca. 1 cm. Drupes enclosed by persistent inflated calyx, blue-black, 8–10 mm in diam.

• Forests along streams; 700–1500 m. Guangxi, Guizhou, Yunnan.

Medicinal.

20. *Clerodendrum lindleyi* Decaisne ex Planchon, Fl. Serres Jard. Eur. 9: 17. 1853.

尖齿臭茉莉 jian chi xiu mo li

Shrubs 0.5–3 m tall. Branchlets pubescent, nearly 4-angled when young, becoming subterete. Petiole 2–11 cm, pubescent; leaf blade broadly ovate to cordate, 6.5–12.5(–22) × 5.5–10(–20) cm, papery, pubescent especially abaxially, with several peltate glands at base, base truncate to cordate, margin irregularly undulate, apex acuminate. Inflorescences

terminal, dense, capitate corymbose cymes; peduncle pubescent; bracts lanceolate, 2.5–4 cm, puberulent, with several peltate glands. Calyx 1–1.5 cm, deeply 5-lobed, densely puberulent, with several peltate glands; lobes linear-lanceolate, 4–10 mm. Corolla pinkish to purple, tube 2–3 cm; lobes obovate, 5–7 mm. Stamens exserted. Style exceeding stamens. Drupes enclosed in purple, inflated, persistent calyx, blue-black, subglobose, 5–6 mm in diam. Fl. and fr. Jun–Nov.

• Mixed forests on mountain slopes and along roadsides; 1200–2800 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangsu, Jiangxi, Sichuan, Yunnan, Zhejiang.

Medicinal.

21. *Clerodendrum yunnanense* Hu ex Handel-Mazzetti, Akad. Wiss. Wien, Math.-Naturwiss. Kl., Anz. 61: 168. 1924.

滇常山 dian chang shan

Shrubs 1–3 m tall. Branchlets distinctly lenticellate, densely yellow-brown tomentose when young, glabrescent. Petiole 1.5–6 cm; leaf blade ovate, broadly ovate, or cordate, 4–14 × 3–10 cm, papery, abaxially densely yellowish or yellow-brown pubescent especially on veins and with several peltate glands near base, adaxially strigose, base broadly cuneate, rounded, or cordate, margin entire or irregularly sparsely serrate, apex acuminate to acute. Inflorescences terminal, dense flat-topped cymes; bracts ovate-elliptic, 2–3.5 cm, deciduous; bractlets linear, 1–2.2 cm. Calyx campanulate, 6–9 mm, minutely tomentose, with several large glands; lobes linear lanceolate or triangular, ca. 2 mm. Corolla white or pinkish, 4–7 mm, lobes oblong to ovate. Stamens exserted. Style exceeding stamens. Drupes mostly enclosed by persistent inflated calyx, blue-black, subglobose, ca. 7 mm in diam. Fl. and fr. Apr–Oct.

• 2000–3000 m. SW Sichuan, Yunnan.

- 1a. Calyx lobes triangular 21a. var. *yunnanense*
1b. Calyx lobes linear-lanceolate 21b. var. *linearilobum*

21a. *Clerodendrum yunnanense* var. *yunnanense*

滇常山 dian chang shan

Calyx lobes triangular. Corolla tube ± shorter than calyx.

• Thickets on mountain slopes and in valleys; 2000–3000 m. SW Sichuan, Yunnan.

21b. *Clerodendrum yunnanense* var. *linearilobum* S. L. Chen & G. Y. Sheng in P'ei, L. K. Fu, G. Y. Sheng & T. D. Zhuang, Fl. Reipubl. Popularis Sin. 65(1): 213. 1982.

线齿滇常山 xian chi dian chang shan

Calyx lobes linear-lanceolate. Corolla tube slightly longer to rarely shorter than calyx.

• Thickets along streams; 2000–2300 m. Yunnan.

22. *Clerodendrum bungei* Steudel, Nomencl. Bot., ed. 2, 1: 382. 1840.

臭牡丹 xiu mu dan

Shrubs 1–2 m tall. Branchlets subterete, distinctly lenticellate. Petiole 4–17 cm, densely brown, yellow-brown, or purplish pubescent when young, glabrescent; leaf blade ovate to broadly ovate, 8–20 × 5–15 cm, papery, abaxially sparsely glandular pubescent to subglabrous and with several peltate glands near base, adaxially sparsely pubescent, base

cuneate, truncate, or cordate, margin serrate, apex acuminate to acute, veins 4–6 pairs. Inflorescences terminal, dense, capitate, flat-topped cymes; bracts lanceolate to ovate-lanceolate, ca. 3 cm, deciduous; bractlets lanceolate, ca. 1.8 cm. Calyx campanulate, tube 2–6 mm, pubescent, with several peltate glands; lobes narrowly triangular to triangular, 1–10 mm. Corolla pinkish, red, or purple, tube 2–3 cm; lobes obovate, 5–8 mm. Stamens and style exerted. Drupes blue-black, subglobose, 6–12 mm in diam. Fl. and fr. May–Nov.

1100–2500 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [Vietnam].

Medicinal.

- 1a. Inflorescences dense; calyx teeth 1–3 mm
..... 22a. var. *bungei*
1b. Inflorescences lax; calyx teeth ca. 10 mm
..... 22b. var. *megacalyx*

22a. *Clerodendrum bungei* var. *bungei*

臭牡丹 xiu mu dan

Clerodendrum fragrans (Ventenat) Willdenow var. *foetidum* (Bunge) Bakhuizen; *C. yatschuense* H. Winkler; *Pavetta esquirolii* H. Léveillé.

Inflorescences dense. Calyx teeth 1–3 mm.

Mixed forests on mountain slopes and along roadsides; below 2500 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [Vietnam].

Medicinal.

22b. *Clerodendrum bungei* var. *megacalyx* C. Y. Wu ex S. L. Chen in Pei, L. K. Fu, G. Y. Sheng, & T. D. Zhuang, Fl. Reipubl. Popularis Sin. 65(1): 213. 1982.

大萼臭牡丹 da e xiu mu dan

Inflorescences lax. Calyx teeth ca. 10 mm.

- Forest edges on mountain slopes; 1100 m. Sichuan.

23. *Clerodendrum confine* S. L. Chen & T. D. Zhuang in Pei, L. K. Fu, G. Y. Sheng, & T. D. Zhuang, Fl. Reipubl. Popularis Sin. 65(1): 213. 1982.

川黔大青 chuan qian da qing

Shrubs 1–2 m tall. Branchlets yellow-brown to purplish, subterete to nearly 4-angled, with elliptic lenticels, pubescent. Petioles 3–5.5 cm, densely pubescent; leaf blade elliptic to ovate-elliptic, 6–15 × 3.5–7 cm, papery, abaxially pubescent on veins and glandular, adaxially sparsely pubescent, base broadly cuneate to rounded or rarely truncate, margin entire or rarely several dentate, apex acuminate, veins 6 or 7 pairs. Inflorescences terminal, lax corymbose cymes; peduncle 2–3.5 cm, densely pubescent; bracts deciduous; bractlets linear, 5–8 mm. Calyx 1–1.5 cm, submembranous, deeply 5-lobed, puberulent, with several peltate glands; lobes triangular-lanceolate, as long as tube. Corolla pinkish, tube 1–2 mm; lobes spatulate, ca. 1 cm. Stamens and style exerted.

- Thickets; 1400–2000 m. Guizhou, Sichuan.

24. *Clerodendrum colebrookianum* Walpers, Repert. Bot. Syst. 4: 114. 1845.

腺茉莉 xian mo li

Shrubs or small trees, 1.5–3(–6) m tall. Branchlets robust, 4-angled, densely yellow-brown puberulent when young, glabrescent. Petiole 2–20 cm; leaf blade broadly ovate to elliptic-cordate, 7–17 × 6–21 cm, papery, abaxially puberulent and with several peltate glands near base, adaxially sparsely pubescent to subglabrous, base cuneate to cordate, margin entire to slightly undulate, apex acuminate to acute. Inflorescences terminal corymbose cymes, 4–6-branched; peduncle robust, 1.5–13 cm; bracts lanceolate, ca. 1.5 cm, deciduous. Calyx campanulate, 3–5 mm, tube 1–3 mm, densely pubescent, with several peltate glands; teeth triangular, less than 1 mm. Corolla white or rarely pinkish, tube 1.2–2.5 cm, without glands; lobes oblong, 3–6 mm. Stamens and style exerted. Fruiting calyx purple, inflated. Drupes blue-green, becoming black when dry, subglobose, ca. 1 cm in diam. Fl. and fr. Aug–Dec.

Forests or thickets on mountain slopes and along roads; 500–2000 m. Guangdong, Guangxi, Xizang, Yunnan [Bangladesh, Bhutan, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

25. *Clerodendrum kaichianum* Hsu, Observ. Fl. Hwangshan. 165. 1965.

浙江大青 zhe jiang da qing

Shrubs or small trees, 2–5 m tall. Branchlets nearly 4-angled, densely yellow-brown, brown, or reddish brown pubescent when young. Petiole 3–6 cm; leaf blade elliptic-ovate to ovate, 8–18 × 5–11 cm, papery, abaxially strigose only on veins and with several peltate glands near base, adaxially sparsely strigose, base broadly cuneate to subtruncate and slightly oblique, margin entire, apex acuminate, veins 5 or 6 pairs. Inflorescences terminal, corymbose cymes, 4- or 5-branched near base; bracts deciduous. Calyx pinkish, ca. 3 mm, outside puberulent and glandular; teeth triangular, ca. 1 mm. Corolla cream white to pinkish, tube 1–1.5 cm, outside glandular; lobes oblong, ca. 6 × 3 mm. Stamens exerted; filaments longer than style. Fruiting calyx purplish, inflated. Drupes blue-green, obovate to globose, ca. 1 cm in diam. Fl. and fr. Jul–Oct.

- Valleys; 500–1300 m. Anhui, Fujian, Jiangxi, Zhejiang.

26. *Clerodendrum villosum* Blume, Bijdr. 811. 1826.

绢毛大青 juan mao da qing

Shrubs 2.5–4 m tall, sometimes climbing. Branchlets 4-angled, densely yellow-brown sericeous. Petiole terete, 3–14 cm, densely sericeous; leaf blade broadly ovate-cordate to cordate, 11–21 × 7–16 cm, villous especially on veins, base truncate to cordate, margin entire, apex acuminate, veins prominent on both surfaces. Inflorescences terminal cymose panicles, 15–25 × 14–20 cm, densely sericeous; bracts ovate, 4.5–6.5 cm, persistent; bractlets ovate, 6–10 mm, deciduous, with several peltate glands. Calyx campanulate, ca. 7 mm, outside densely sericeous and with peltate glands, inside pubescent; lobes subsecund, obovate-oblong, as long as tube. Corolla white or pinkish yellow, tube equal or slightly longer than calyx, limb subsecund, outside densely sericeous, inside glabrous; lobes obovate-oblong, ca. 7 mm. Stamens exerted, as long as style. Drupes green-black, globose, 8–10 mm in diam. Fl. and fr. Mar–Apr.

Forests or thickets in valleys and along roadsides; 700–900 m. Yunnan [Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

27. *Clerodendrum kiangsiense* Merrill ex H. L. Li, J. Arnold Arbor. 25: 426. 1944.

江西大青 jiang xi da qing

Shrubs 2–3 m tall. Branchlets densely brown pubescent. Petiole 2–4.5 cm, pubescent; leaf blade lanceolate to ovate, (5–)10–13 × (3–)5–6(–9) cm, papery, both surfaces pubescent, abaxial glands small and inconspicuous, base subrounded to subtruncate, margin entire or subentire, apex acuminate to short caudate, veins 4–7 pairs. Inflorescences terminal, corymbose thyrses, 3–10 × 7–19 cm; bracts oblong, 8–10 × 3–4 mm, pubescent glandular. Calyx campanulate, ca. 6 mm, teeth triangular, outside pubescent glandular. Corolla white or pinkish, puberulent; tube slender, 7–10 × 1 mm; lobes oblong, ca. 6 mm. Stamens exerted. Style longer than stamens. Drupes green, subglobose. Fl. and fr. Jun–Oct.

- Forests; 100–400 m. Jiangxi, Zhejiang.

28. *Clerodendrum mandarinorum* Diels in Engler, Bot. Jahrb. Syst. 29: 549. 1900.

海通 hai tong

Clerodendrum bodinieri H. Léveillé; *C. cavaleriei* H. Léveillé; *C. kwangtungense* Handel-Mazzetti var. *puberulum* H. L. Li; *C. tsaii* H. L. Li.

Shrubs or trees 2–20 m tall. Branchlets nearly 4-angled, densely yellow-brown tomentose. Leaf blade ovate-elliptic, broadly ovate, or cordate, 10–27 × 6–20 cm, subleathery, abaxially densely gray tomentose, adaxially green, base truncate to subcordate and suboblique, apex acuminate. Inflorescences terminal, lax, corymbose, many branched, densely yellow-brown tomentose; bracts 4–5 mm, deciduous; bractlets linear, ca. 3 mm. Flowers fragrant. Calyx campanulate, 3–4 mm, densely pubescent, with several peltate glands; teeth awl-shaped, 1.5–2.5 mm. Corolla white or pinkish, 7–10 mm, tube slender; lobes oblong, ca. 3.5 mm. Stamens and style exerted. Fruiting calyx red to pink, inflated, thickened, enclosing 2/3 of drupe. Drupes blue-black, subglobose, reflexed. Fl. and fr. Jul–Dec.

Thickets along streams and roadsides; 300–2200 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan [Vietnam].

Medicinal.

Allied to *Clerodendrum kaichianum* but differs in having much branched inflorescences and calyx teeth narrowly triangular and longer than tube.

29. *Clerodendrum brachystemon* C. Y. Wu & R. C. Fang, Fl. Yunnan. 1: 475. 1977.

短蕊大青 duan rui da qing

Shrubs 4 m tall, densely yellow-brown tomentose on branches, petioles, leaves abaxially, peduncles, and pedicels. Branchlets 4-angled, glandular. Petiole 3.5–8 cm, glandular; leaf blade 10–20 × 5–10 cm, glandular, adaxially densely pubescent, base rounded to truncate, margin entire, apex acuminate. Inflorescences dichotomous, lax; peduncle 2–7 cm; bracts deciduous; bractlets elliptic-lanceolate, ca. 1 cm. Calyx campanulate, ca. 1.5 cm, yellow-brown pubescent, glandular, with several peltate glands; lobes lanceolate to ovate, ca. 9 mm, acuminate. Corolla white, 3–3.5 cm, tube slender, pilose, outside glandular; lobes ovate, 7–10 mm. Stamens equal or slightly longer than corolla tube. Style

slightly longer than stamens. Drupes enclosed in inflated persistent calyx, globose, ca. 4 mm. Fl. and fr. Aug–Oct.

- Open forests along valleys; 800–1400 m. Xizang (Médog), Yunnan (Xishuangbanna Zizhizhou).

Allied to *Clerodendrum trichotomum* but differs in stamens and styles not as exerted and petioles densely yellow-brown tomentose.

30. *Clerodendrum trichotomum* Thunberg, Nova Acta Regiae Soc. Sci. Upsal. 3: 201. 1780.

海州常山 hai zhou chang shan

Shrubs or small trees, 1.5–10 m tall. Branchlets lenticellate. Petiole 2–8 cm; leaf blade greenish abaxially and dark green adaxially, ovate-elliptic, triangular-ovate, or ovate, 5–16 × 2–13 cm, papery, base broadly cuneate, truncate, or rarely cordate, margin entire or rarely undulate, apex acuminate, veins 3–5 pairs. Inflorescences axillary or terminal, lax, corymbose cymes, dichotomous, 8–18 cm; peduncle 3–6 cm; bracts elliptic, deciduous. Flowers fragrant. Calyx greenish, becoming purple, deeply 5-lobed; lobes triangular-lanceolate to ovate, acute. Corolla white or pinkish, ca. 2 cm, tube slender; lobes oblong, 5–10 × 3–5 mm. Style shorter than stamens, both exerted. Drupes blue-purple, subglobose, ca. 6–8 mm in diam.

Below 2400 m. Throughout China except Nei Mongol, Xinjiang, and Xizang [India, Japan, Korea; SE Asia].

- 1a. Branchlets, leaves, and inflorescences slightly puberulent or glabrous 30a. var. *trichotomum*
- 1b. Branchlets, leaves, and inflorescences densely rust colored tomentose 30b. var. *ferrugineum*

30a. *Clerodendrum trichotomum* var. *trichotomum*

海州常山 hai zhou chang shan

Clerodendrum fargesii Dode; *C. koshunense* Hayata; *C. serotinum* Carrière; *C. trichotomum* var. *fargesii* (Dode) Rehder; *C. trichotomum* var. *villosum* Hsu; *Siphonanthus trichotomum* (Thunberg) Nakai; *S. trichotomum* var. *fargesii* (Dode) Nakai.

Branchlets, petioles, and peduncles ± yellow-brown pubescent to subglabrous. Leaf blade 5–16 × 2–13 cm, gray pubescent when young, glabrescent.

Thickets on mountain slopes; below 2400 m. Throughout China except Nei Mongol, Xinjiang, and Xizang [India, Japan, Korea; SE Asia].

30b. *Clerodendrum trichotomum* var. *ferrugineum* Nakai, Bot. Mag. (Tokyo) 31: 109. 1917.

锈毛海州常山 xiu mao hai zhou chang shan

Branchlets and inflorescences rust colored tomentose. Leaf blade 5–10 × 3–6 cm, densely rust colored tomentose.

- Below 2400 m. S Taiwan.

Specimens of this variety have not been seen by the authors. The variety is possibly close to *Clerodendrum brachystemon*.

31. *Clerodendrum griffithianum* C. B. Clarke in J. D. Hooker, Fl. Brit. Ind. 4: 590. 1885.

西垂茉莉 xi chui mo li

Shrubs 1–4 m tall; branchlets, petioles, peduncles, pedicels, and calyces viscid pubescent. Petiole 1.5–4 cm; leaf

blade elliptic-lanceolate to elliptic, 5–12 × 2.5–6 cm, papery, pubescent or adaxially subglabrous, base cuneate to subrounded, margin usually entire, apex acuminate to caudate. Inflorescences terminal, few to many 3-flowered cymes; bracts linear, 1–1.5 cm. Calyx purple, ca. 1.5 cm, tube short. Corolla white, ca. 4 cm, outside densely yellow glandular; tube slender, ca. 3 cm; lobes spatulate, ca. 1 cm. Fruiting calyx enlarged; teeth triangular-lanceolate, overtopping drupe. Drupes black, globose, ca. 1 cm in diam. Fl. and fr. Nov-Jun.

Forests; 800–1700 m. S Yunnan [India, Myanmar].

32. *Clerodendrum inerme* (Linnaeus) Gaertner, *Fruct. Sem. Pl. 1*: 271. 1788.

苦郎树 ku lang shu

Volkameria inerme Linnaeus, *Sp. Pl. 2*: 637. 1753; *Clerodendrum nerifolium* (Roxburgh) Schauer; *V. nerifolia* Roxburgh.

Shrubs. Branches and branchlets pubescent. Petiole ca. 1 cm to leaf subsessile; leaf blade elliptic-lanceolate, ovate-lanceolate, or elliptic, thick papery, abaxially pubescent, adaxially subglabrous and glandular, base obtuse, margin entire, apex obtuse. Inflorescences usually 3-flowered, pubescent; peduncle 2–4 mm; bracts linear, ca. 2 cm. Calyx subtruncate, with minute rudimentary teeth, outside pubescent, inside glabrous, sparsely glandular. Corolla white; tube 2–3 cm, ca. 2 mm in diam. at throat; lobes elliptic, ca. 7 mm. Stamens exerted, pubescent at base of filaments. Style and ovary glabrous. Drupes gray-yellow, obovoid to subglobose, 6–11 mm in diam. Fl. and fr. Mar-Dec.

Sea coast; 100–200 m. Fujian, Guangdong, Guangxi, Taiwan [S and SE Asia, Australia, Pacific Islands].

Medicinal.

33. *Clerodendrum subscaposum* Hemsley, *Hooker's Icon. Pl. 27*: t. 2675. 1900.

抽葶大青 chou ting da qing

Subshrubs 30–50 cm tall. Branchlets greenish when young, becoming gray-brown, shiny, and glabrous. Petiole subglabrous, 7–18 cm but leaf subsessile below inflorescence; leaf blade ovate, 5.5–15 × 4.5–13 cm, membranous, abaxially gray and subglabrous to sparsely small glandular especially along veins, adaxially pubescent and gray glandular, base cordate, margin irregularly serrate, apex acuminate to acute. Thyrses of 3–5-flowered cymes, 30–40 cm; peduncle purple, sparsely small glandular; bracts linear to narrowly lanceolate, 3–7 mm; bractlets linear, ca. 2 mm. Pedicel slender, 1.5–2.5 cm. Calyx campanulate, ca. 2 × 2–4 mm, truncate to minutely 5-dentate, glabrous. Corolla bluish purple, deeply 5-lobed, sparsely glandular; tube slender, ca. 5 mm; lobes elliptic to obovate, ca. 5 mm. Stamens and style long exerted. Fruiting calyx not enlarged. Drupes ca. 3 mm in diam., apically glandular.

Mountain slopes; 1400–2100 m. S Yunnan [India, Vietnam].

34. *Clerodendrum serratum* (Linnaeus) Moon, *Cat. Pl. Ceylon 46*. 1824.

三对节 san dui jie

Shrubs 1–4 m tall. Branchlets densely yellow pubescent especially on nodes when young, becoming dark brown to

gray-yellow and glabrous. Leaves opposite or in threes; petiole to 5 cm or leaf subsessile; leaf blade oblong, obovate-oblong, elliptic, or ovate, 6–30 × 2.5–11 cm, papery, pubescent, margin subentire to serrulate or sparsely coarse serrate, apex acuminate to acute; veins 10 or 11 pairs, abaxially prominent. Inflorescences terminal thyrses, densely yellow-brown pubescent, cymes sometimes monochasial; bracts sessile, ovate to broadly ovate, 1.5–4.5 × 0.5–1.8 cm, pubescent; bractlets lanceolate to ovate. Calyx ca. 5 mm, truncate to minutely 5-dentate, pubescent. Corolla white, bluish, or purplish, tube ca. 7 mm; lobes oblong to obovate, 6–12 mm. Stamens ca. 2–4 cm, long exerted, base pubescent. Ovary glabrous. Style long exerted. Drupes green when young, becoming black, subglobose. Fl. and fr. Jun-Dec.

200–1800 m. Guangxi, Guizhou, Xizang, Yunnan [E Africa, S and SE Asia].

Medicinal.

- 1a. Leaves petiolate with petioles 2–5 cm; filament bases compressed 34d. var. *wallichii*
- 1b. Leaves sessile or subsessile; filament bases cylindrical.
 - 2a. Base of leaf blade clasping ... 34c. var. *amplexifolium*
 - 2b. Base of leaf blade not clasping.
 - 3a. Inflorescences conical; leaves opposite or in 3s 34a. var. *serratum*
 - 3b. Inflorescences cylindrical; leaves opposite 34b. var. *herbaceum*

34a. *Clerodendrum serratum* var. *serratum*

三对节 san dui jie

Volkameria serrata Linnaeus, *Mant. Pl. 90*. 1767.

Leaves opposite or in 3s; blade oblong to obovate-oblong, 6–30 × 2.5–11 cm, base decurrent to cuneate, margin serrulate. Inflorescences conical, 10–30 × 9–12 cm.

Forests on mountain slopes and in valleys; 200–1800 m. Guangxi, Guizhou, Xizang, Yunnan [E Africa, S and SE Asia].

34b. *Clerodendrum serratum* var. *herbaceum* (Roxburgh ex Schauer) C. Y. Wu, *Fl. Yunnan. 1*: 468. 1977.

草本三对节 cao ben san dui jie

Clerodendrum herbaceum Roxburgh ex Schauer in A. de Candolle, *Prodr. 11*: 675. 1847.

Leaf blade oblanceolate-ovate, (9–)12–16(–18) × (2.5–)4.5–6(–8) cm, margin sparsely coarse serrate. Inflorescences cylindrical.

Mixed forests on mountain slopes; 400–1500 m. Guangxi, Guizhou, Yunnan [E Africa, S and SE Asia].

34c. *Clerodendrum serratum* var. *amplexifolium* Moldenke, *Phytologia 4*: 51. 1952.

三台花 san tai hua

Leaves subsessile, base clasping.

- Thickets; 600–1600 m. Guangxi, Guizhou, Yunnan.

34d. *Clerodendrum serratum* var. *wallichii* C. B. Clarke in J. D. Hooker, *Fl. Brit. Ind. 4*: 592. 1885.

大序三对节 da xu san dui jie

Clerodendrum divaricatum Jack.

Petiole 2–5 cm; leaf blade elliptic to ovate, 10–14(–25) × 6–8(–13) cm, base broadly cuneate to subrounded, margin subentire to serrulate. Inflorescences conical thyrses, spreading. Calyx ± truncate.

Open forests on mountain slopes; 700–1800 m. Xizang, Yunnan [Cambodia, India, Indonesia, Malaysia, Vietnam].

