

11. VITEX Linnaeus, Sp. Pl. 2: 638. 1753.

牡荆属 mu jing shu

Trees or shrubs. Branches glabrous or sparsely pubescent. Leaves opposite, palmately (1–)3–8-foliolate; leaflets petiolulate, margin entire, dentate, serrate, or incised. Inflorescences terminal or axillary cymes, thyrses, or panicles; bracts usually small, often early deciduous. Calyx campanulate, tubular, or funnelform, sometimes 2-lipped, usually truncate or shortly 5-dentate. Corolla blue, white, or yellow, 2-lipped, lower lip 3-lobed with middle lobe greatly elongated, upper lip usually 2-lobed. Stamens 4, didynamous, sometimes exserted; anther locules attached only at tip, becoming divaricate. Ovary 2–4-locular; ovules 1 or 2 per locule. Style filiform; stigma 2-cleft. Drupes subtended by enlarged calyx, globose, ovoid, or obovoid, normally 4-locular and 4-seeded but often some locules suppressed and base of pyrene forming a hollowed cavity, endocarp a bony pyrene, mesocarp generally fleshy. Seeds obovoid or oblong, endosperm absent; cotyledons usually fleshy.

About 250 species: chiefly tropical, few in temperate regions of both hemispheres; 14 species in China.

- 1a. Inflorescences axillary, subtended by normal leaves.
 - 2a. Leaflets glabrous; inflorescences thyrses with a well-defined main axis and short lateral cymes 10. *V. peduncularis*
 - 2b. Leaflets pubescent; inflorescences cymes, usually rounded.
 - 3a. Leaves often with more than 3 leaflets; cymes to 3, produced in succession from 1 axil 11. *V. burmensis*
 - 3b. Leaves always 3-foliolate; cymes rarely more than 1 per axil.
 - 4a. Corolla yellow, tube slender and cylindric 12. *V. vestita*
 - 4b. Corolla white flushed with pink or blue, tube funnelform to campanulate.
 - 5a. Cyme branches narrowly divergent; corolla to 1.7 cm 13. *V. yunnanensis*
 - 5b. Cyme branches widely divergent; corolla to 1 cm 14. *V. duclouxii*
- 1b. Inflorescences terminal, not subtended by normal leaves.
 - 6a. Peduncles, pedicels, and calyces glabrous or subglabrous.
 - 7a. Leaflets serrate; calyx distinctly dentate 3. *V. sampsonii*
 - 7b. Leaflets entire; calyx teeth rudimentary.
 - 8a. Branchlet lenticels obscure; corolla outside puberulent 1. *V. kwangsiensis*
 - 8b. Branchlet lenticels conspicuous; corolla outside glabrescent 2. *V. tripinnata*
 - 6b. Peduncles, pedicels, and calyces pubescent.
 - 9a. Leaflets abaxially pubescent only along main veins.
 - 10a. Leaflets lanceolate to oblong-lanceolate; bractlets persistent in flower 4. *V. pierreana*
 - 10b. Leaflets obovate to elliptic or oblong; bractlets early deciduous 5. *V. quinata*
 - 9b. Leaflets abaxially densely pubescent.
 - 11a. Leaflets with glandular hairs, adaxially glabrescent and grayish dotted; bracts deciduous 6. *V. canescens*
 - 11b. Leaflets puberulent, not adaxially dotted; bracts persistent.
 - 12a. Prostrate shrubs 8. *V. rotundifolia*
 - 12b. Erect shrub or small trees.
 - 13a. Leaves (1–)3(–5)-foliolate; middle leaflet sessile; calyx with 5 obscure teeth, shorter than fruit 7. *V. trifolia*
 - 13b. Leaves 3–7-foliolate; middle leaflet distinctly petiolulate; calyx with 5 distinct teeth, as long as fruit 9. *V. negundo*

1. *Vitex kwangsiensis* P'ei, Mem. Sci. Soc. China 1(3): 93. 1932.

广西牡荆 guang xi mu jing

Trees. Branchlets grayish green, obscurely lenticellate. Leaves 2–5-foliolate; petiole 2–7 cm; petiolules 1–1.5 cm; leaflets ovate-lanceolate to ovate, abaxially bluish green, glabrous, and yellow glandular, adaxially green and glabrescent except pubescent along veins especially along midvein, base cuneate, margin entire, apex acuminate to caudate-acuminate; central leaflet 3–6.5 × 2–3.5 cm, lateral leaflets smaller. Panicles 6–10 cm; peduncle subglabrous. Calyx ca. 2.5 mm, minutely and regularly 5-dentate, outside glabrous and glandular. Corolla yellow; tube 3.5–6 mm, outside puberulent and glandular. Stamens exserted; filaments puberulent on basal half. Ovary glabrous. Style glabrous. Fruit globose. Fl. May–Jun, fr. Jul–Sep.

• Sparse forests on mountain slopes; 300–600 m. Guangxi (Longzhou Xian and Ningming Xian).

2. *Vitex tripinnata* (Loureiro) Merrill, Trans. Amer. Philos. Soc., n.s. 24(2): 335. 1935.

越南牡荆 yue nan mu jing

Tripinna tripinnata Loureiro, Fl. Cochinch. 2: 391. 1790; *Vitex annamense* Dop.

Shrubs or trees, 4–8 m tall. Branches gray-brown; branchlets black-purple when dry, conspicuously lenticellate. Leaves 3-foliolate; petiole 2–5 mm; petiolules 0.5–1.7 cm; leaflets narrowly elliptic, narrowly ovate, ovate, or obovate, glabrous, abaxially greenish and yellow glandular, base cuneate to subrounded, margin entire, apex acuminate to short caudate-acuminate; central leaflet 3–11 × 2–4 cm. Panicles 6–11 cm; branches dichotomous or trichotomous; peduncle 5–10 mm. Calyx 2–3 mm, minutely 5-dentate, subglabrous, yellow glandular. Corolla yellow to purplish; tube ca. 5 mm, outside subglabrous and glandular, villous in throat. Stamens exserted. Ovary glabrous. Fruit black when dry, globose, ca. 1 cm in diam. Fl. May, fr. Jun–Jul.

Forest edges on mountain slopes; 300–600 m. Hainan [Cambodia, Vietnam].

3. *Vitex sampsonii* Hance, J. Bot. 6: 115. 1868.

广东牡荆 *guang dong mu jing*

Shrubs 1–2 m tall. Branchlets sparsely pubescent to subglabrous; buds yellowish brown puberulent. Leaves 3–5-foliolate; petiole 1–3 cm; leaflets subsessile to very short petiolulate, elliptic-lanceolate, obovate-lanceolate, or obovate, base acuminate to cuneate, margin coarsely dentate with 1–5 teeth per side, apex acuminate, acute, or obtuse; central leaflet 1.5–4 × 1–2 cm. Panicles 10–20 cm. Calyx ca. 3 mm, teeth acuminate at maturity, both surfaces slightly pubescent to subglabrous. Corolla bluish purple, ca. 1 cm, both surfaces densely pubescent. Filaments pilose at base. Ovary apically with a few hairs. Fruiting calyx equal or longer than fruit. Fruit subglobose, ca. 3 mm in diam.

• Mountain slopes along roadsides; 400–600 m. Guangdong, Guangxi, Hunan, Jiangxi.

4. *Vitex pierreana* Dop, Bull. Soc. Hist. Nat. Toulouse 57: 205. 1928.

莺哥木 *ying ge mu*

Trees 6–15 m tall; bark gray-brown. Branchlets pilose to subglabrous. Leaves (3- or) 5-foliolate; petiole 2.5–7 cm, sparsely hairy; petiolules 5–15 mm; central leaflet lanceolate to oblong-lanceolate, 9–14 × 2.5–5 cm, glabrous except puberulent along midvein, abaxially yellow glandular, adaxially grayish, base cuneate to slightly decurrent, margin entire, apex acuminate. Panicles terminal, 13–20 cm; bracts linear, ca. 3 mm, pubescent. Calyx cup-shaped, ca. 2 mm, minutely 5-dentate, outside pubescent and glandular. Corolla yellowish white, 5–6 mm, outside puberulent and glandular. Filaments pilose at base. Ovary yellow glandular. Fruit black, obovoid to subglobose, glabrous, glandular. Fl. Mar–May, fr. May–Jul.

Mixed forests on mountain slopes; 300–500 m. Hainan [Laos, Vietnam].

5. *Vitex quinata* (Loureiro) Williams, Bull. Herb. Boissier, sér. 2, 5: 431. 1905.

山牡荆 *shan mu jing*

Trees 4–12 m tall, evergreen; bark brown. Branchlets pubescent and glandular when young, glabrescent. Leaves 3–5-foliolate; petiole 2.5–6 cm; petiolules 0.5–2 cm; leaflets obovate-elliptic to obovate or oblong to elliptic, thickly papery, both surfaces shiny, abaxially yellow glandular, base cuneate, margin entire or sometimes apically crenulate dentate, apex acuminate, acute, or obtuse; central leaflet 5–20 × 2.5–8.5 cm. Panicles terminal, lax, 9–18 cm, densely yellowish brown pubescent. Calyx 2–3 mm, rudimentarily dentate, densely yellowish brown pubescent, glandular. Corolla yellowish, 6–8 mm, 2-lipped, 5-lobed, outside pubescent and glandular. Stamens exerted. Ovary glandular. Fruiting calyx truncate. Fruit black, obovoid to globose, ca. 8 mm in diam. Fl. May–Jul, fr. Aug–Sep.

200–1700 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Taiwan, Xizang, Yunnan, Zhejiang [India, Indonesia, Japan, Malaysia, Philippines, Thailand].

- 1a. Filaments glabrous at base 5a. var. *quinata*
1b. Filaments distinctly pilose at base 5b. var. *puberula*

5a. *Vitex quinata* var. *quinata*

山牡荆 *shan mu jing*

Cornutia quinata Loureiro, Fl. Cochinch. 2: 387. 1790;
Vitex heterophylla Roxburgh.

Central leaflet obovate-elliptic to obovate, 5–9 × 2.5–4 cm, adaxially subglabrous, with appressed hairs on midvein, and grayish dotted. Filaments widened and glabrous at base. Fl. May–Jul, fr. Aug–Sep.

Forests on mountain slopes; 200–1200 m. Fujian, Guangdong, Guangxi, Hunan, Jiangxi, Taiwan, Zhejiang [India, Japan, Malaysia, Philippines].

5b. *Vitex quinata* var. *puberula* (H. J. Lam) Moldenke, Phytologia 3: 489. 1951.

微毛布惊 *wei mao bu jing*

Vitex heterophylla Roxburgh var. *puberula* H. J. Lam, Verben. Malay. Archip. 189. 1919.

Central leaflet oblong to elliptic, 15–20 × 5–8.5 cm, adaxially glabrescent. Filaments distinctly pilose at base.

Mixed forests on mountain slopes and along roadsides; 700–1700 m. Guangxi, Guizhou, Hainan, Taiwan, Xizang, Yunnan [Philippines, Thailand].

6. *Vitex canescens* Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 42(2): 101. 1873.

灰毛牡荆 *hui mao mu jing*

Vitex kweichowensis P'ei.

Trees 3–15(–20) m tall; bark black-brown. Branchlets densely gray-yellow pubescent. Leaves 3–5-foliolate; petiole (3.5–)7–10 cm; petiolules 0.5–3 cm; leaflets elliptic-lanceolate, elliptic, or ovate, 6–18 × 2.5–9 cm, papery, abaxially densely softly pubescent, sometimes glabrescent, and glandular, adaxially pubescent, base cuneate to subrounded and sometimes oblique, margin entire or obscurely undulate, apex acuminate to acute. Thyrses 10–30 cm; peduncle densely gray-yellow pubescent; bracts deciduous. Calyx minutely 5-dentate, outside densely pubescent and glandular, inside pubescent. Corolla yellowish, outside densely pubescent and glandular, pilose at insertion of stamens. Stamens exerted. Ovary apically glandular. Style glabrous. Drupes yellow, becoming black, globose, shiny, smooth.

Mixed forests; 200–1600 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Xizang, Yunnan [Cambodia, India, Laos, Malaysia, Myanmar, Thailand, Vietnam].

Medicinal, timber.

7. *Vitex trifolia* Linnaeus, Sp. Pl. 2: 638. 1753.

蔓荆 *man jing*

Shrubs or small trees, 1.5–5 m tall, erect. Branchlets densely pubescent. Leaves 1–3(–5)-foliolate; petiole 1–3 cm; leaflets sessile, oblong, lanceolate, or obovate, abaxially densely gray tomentose, adaxially green and glabrous or subglabrous, base cuneate, margin entire, apex obtuse, veins ca. 8 pairs and slightly prominent on both surfaces; central or single leaflet 2.5–9 × 1.7–3 cm. Panicles 3–15 cm; peduncle densely gray tomentose. Calyx slightly 5-dentate, outside gray pubescent, inside glabrous. Corolla purplish to bluish purple, 6–10 mm, outside scaly white, pubescent at filament bases and on inside of lower lobe. Stamens exerted. Ovary

glabrous, with or without glands. Style glabrous. Fruit black, subglobose, ca. 5 mm in diam. Fl. Apr-Aug, fr. Aug-Nov.

100–1700 m. Anhui, Fujian, Guangdong, Guangxi, Hebei, Jiangsu, Jiangxi, Liaoning, Shandong, Taiwan, Yunnan, Zhejiang [S and SE Asia, Australia, Pacific Islands].

1a. Ovary without glands 7c. var. *taihangensis*
1b. Ovary glandular.

2a. Leaves usually 3(–5)-foliolate 7a. var. *trifolia*

2b. Leaves both simple and compound
..... 7b. var. *subtrisecta*

7a. *Vitex trifolia* var. *trifolia*

蔓荆 man jing

Vitex bicolor Willdenow; *V. negundo* Linnaeus var. *bicolor* (Willdenow) H. J. Lam; *V. trifolia* var. *bicolor* (Willdenow) Moldenke; *V. trifolia* var. *trifoliolata* Schauer.

Leaves 3(–5)-foliolate; middle leaflet 5–9 × 1.7–3 cm. Fl. Jul, fr. Sep–Nov.

Open places or along river banks; 100–400 m. Fujian, Guangdong, Guangxi, Taiwan, Yunnan [SE Asia, Australia, Pacific Islands].

7b. *Vitex trifolia* var. *subtrisecta* (Kuntze) Moldenke, Phytologia 8: 88. 1961.

异叶蔓荆 yi ye man jing

Vitex agnuscastus Linnaeus var. *subtrisecta* Kuntze, Revis. Gen. Pl. 2: 510. 1891.

Shrubs, erect. Leaves both simple and compound; compound leaves usually 3-foliolate. Fl. Apr–Jul, fr. Sep–Nov.

Mixed forests on mountain slopes and along roadsides; 300–1700 m. Guangdong, S Yunnan [S and SE Asia, Australia, Pacific Islands].

7c. *Vitex trifolia* var. *taihangensis* (L. B. Guo & S. Q. Zhou) S. L. Chen, Novon 1: 58. 1991.

太行荆 tai hang jing

Vitex taihangensis L. B. Guo & S. Q. Zhou, Bull. Bot. Res., Harbin 9(4): 61. 1989.

Shrubs, erect, 40–90 cm tall. Leaves simple or rarely compound; blade lanceolate to ovate-lanceolate. Ovary glabrous, without glands. Fl. Aug.

• Mountain slopes in calcareous soil; 1400 m. Shanxi (Taihang Shan).

8. *Vitex rotundifolia* Linnaeus f., Suppl. Pl. 294. 1781 (publ. 1782).

单叶蔓荆 dan ye man jing

Vitex ovata Thunberg; *V. trifolia* var. *ovata* (Thunberg) Makino; *V. trifolia* var. *simplicifolia* Chamisso; *V. trifolia* var. *unifoliolata* Schauer.

Shrubs, prostrate. Stems prostrate to creeping, rooting at nodes; branchlets silky tomentose when young. Leaves mostly 1(–3)-foliolate, sessile or short petiolate; blade obovate-spatulate, ovate-elliptic, broadly oblong-elliptic, or circular, 2.5–5 × 1.5–3 cm, abaxially velvety to minutely silky tomentose, adaxially usually pale dull green and pubescent, base attenuate to rounded, margin entire, apex abruptly subacuminate to rounded. Inflorescences terminal thyrse, 3–

10 × 1–2.5 cm. Calyx cup-shaped, 4–5 mm, slightly 2-lipped, 5-denticulate, outside minutely silky tomentose and glandular, inside glabrous. Corolla purplish mauve to lilac blue, salverform, outside minutely silky tomentose and glandular, villous in tube and inside on lower half of large anterior lobe of lower lip. Stamens and style exerted. Ovary globose, glabrous, densely glandular. Fruit dark brown when dry, globose. Fl. Jul–Sep, fr. Sep–Nov.

Open sandy areas, usually near sea. Anhui, Fujian, Guangdong, Hebei, Jiangsu, Jiangxi, Liaoning, Shandong, Taiwan, Zhejiang [Japan; SE Asia, Pacific Islands].

Medicinal.

9. *Vitex negundo* Linnaeus, Sp. Pl. 2: 638. 1753.

黄荆 huang jing

Shrubs or small trees. Branchlets densely gray tomentose. Leaves 3–7-foliolate; central leaflet distinctly petiolulate. Calyx campanulate, 5-dentate, gray tomentose. Corolla 2-lipped, 5-lobed, outside puberulent. Stamens exerted. Ovary subglabrous.

100–3200 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Nei Mongol, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Japan; E Africa, S and SE Asia, Pacific Islands].

Fiber, medicinal.

1a. Leaflets distinctly serrate.

2a. Leaflets regularly serrate, abaxially sparsely pubescent 9d. var. *cannabifolia*

2b. Leaflets irregularly serrate, abaxially densely gray tomentose 9e. var. *heterophylla*

1b. Leaflets entire, rarely sparsely serrate.

3a. Inflorescences racemelike thyrse, ultimate cymes lax 9c. var. *thyrsoides*

3b. Inflorescences spikelike thyrse, ultimate cymes compact.

4a. Central leaflet 4–13 × 1–4 cm 9a. var. *negundo*

4b. Central leaflet 1.5–4 × 0.5–1 cm
..... 9b. var. *microphylla*

9a. *Vitex negundo* var. *negundo*

黄荆 huang jing

Vitex arborea Fischer; *V. negundo* f. *alba* P'ei; *V. negundo* f. *laxipaniculata* P'ei; *V. paniculata* Lamarck.

Leaves usually (3–)5-foliolate; leaflets lanceolate, oblong-lanceolate, broadly lanceolate, or ovate, abaxially scaly white, adaxially green or scaly white, base cuneate, margin entire or rarely with 1–3 teeth along apical part; central leaflet 4–13 × 1–4 cm. Inflorescences 10–27 cm; peduncle densely gray tomentose. Fl. Apr–Jun, fr. Jul–Oct.

Mixed thickets on mountain slopes; 200–1400 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Qinghai, Shaanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Japan; E Africa, S and SE Asia, Pacific Islands].

9b. *Vitex negundo* var. *microphylla* Handel-Mazzetti, Symb. Sin. 7: 906. 1936.

小叶荆 xiao ye jing

Vitex microphylla (Handel-Mazzetti) P'ei ex C. Y. Wu.

Leaves (3–)5(–7)-foliolate; leaflets elliptic-lanceolate, abaxially scaly white, adaxially green, base cuneate, margin entire, apex acuminate; middle leaflet 1.5–4 × 0.5–1 cm. Inflorescences 5–11 cm. Fruit pubescent. Fl. and fr. Jul–Nov.

• Thickets along stream banks; 1200–3200 m. Sichuan, Xizang, Yunnan.

9c. *Vitex negundo* var. *thyrsoides* P'ei & S. L. Liou in S. L. Liou, Fl. Reipubl. Popularis Sin. 65(1): 212. 1982.

拟黄荆 ni huang jing

Leaves 3–5-foliolate; leaflets lanceolate to narrowly elliptic, abaxially gray tomentose, adaxially sparsely pubescent or only pubescent along veins. Inflorescences large, lax, racemelike thyrses. Fl. and fr. Aug–Oct.

• Mixed forests on mountain slopes; 300–2100 m. Guangdong, Sichuan.

9d. *Vitex negundo* var. *cannabifolia* (Siebold & Zuccarini) Handel-Mazzetti, Acta Horti Gothob. 9: 67. 1934.

牡荆 mu jing

Vitex cannabifolia Siebold & Zuccarini, Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. 4(3): 152. 1846; *V. negundo* f. *intermedia* P'ei.

Shrubs or small trees. Leaves (3–)5-foliolate; leaflets lanceolate to elliptic-lanceolate, abaxially greenish, minutely pilose, adaxially green, base cuneate, margin regularly coarse serrate, apex acuminate. Panicles 10–20 cm. Corolla purplish. Fruit black, globose. Fl. Jun–Jul, fr. Aug–Nov.

Mixed thickets on mountain slopes and along roadsides; 100–1100 m. Guangdong, Guangxi, Guizhou, Hebei, Henan, Hunan, Sichuan [India, Nepal; SE Asia].

9e. *Vitex negundo* var. *heterophylla* (Franchet) Rehder, J. Arnold Arbor. 28: 258. 1947.

荆条 jing tiao

Vitex incisa Lamarck var. *heterophylla* Franchet, Nouv. Arch. Mus. Hist. Nat., sér. 2, 6: 112. 1883; *V. chinensis* Miller; *V. incisa* Lamarck; *V. negundo* var. *incisa* (Lamarck) C. B. Clarke.

Leaflets deeply incised, essentially pinnatifid, abaxially densely gray tomentose.

Mixed thickets on mountain slopes and along roadsides; 200–1800 m. Anhui, Gansu, Guizhou, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Nei Mongol, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan [India; SE Asia].

10. *Vitex peduncularis* Wallich ex Schauer in A. de Candolle, Prodr. 11: 687. 1847.

长序荆 chang xu jing

Trees 5–15 m tall. Branchlets sparsely pubescent when young, glabrescent. Leaves 3-foliolate; petiole 4–7 cm; petiolules 5–12 mm; leaflets broadly lanceolate to oblong, glabrous, abaxially densely glandular, base cuneate and slightly oblique, margin entire or slightly undulate and ciliate, apex acuminate to acute; central leaflet 10–15 × 4–5 cm. Thyrses 7–17 cm; bracts linear, early deciduous. Calyx 1.8–2.5 cm, outside pubescent and glandular, inside glabrous. Corolla white, outside puberulent, lower lip pilose inside. Stamens included; filaments glabrous. Ovary glabrous. Fruiting calyx minutely 5-dentate to subtruncate. Fruit black,

subglobose, ca. 7 mm in diam., with longitudinal veins when dry. Fl. and fr. Jul–Aug.

Mixed forests; 600–1200 m. S Yunnan [Bangladesh, Cambodia, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

11. *Vitex burmensis* Moldenke, Phytologia 8: 30. 1961.

长叶荆 chang ye jing

Vitex lanceifolia S. C. Huang; *V. lanceolata* P'ei (1932), not Turczaninow (1863).

Shrubs or trees 2–12 m tall. Branches and branchlets pubescent, densely yellowish glandular. Leaves 3–5-foliolate; petioles 2–12 cm; petiolules 0.3–2 cm; leaflets oblong, lanceolate, or ovate-lanceolate, papery, abaxially yellow glandular, adaxially sparsely pubescent and glandular, base cuneate to subrounded and sometimes oblique, margin entire, apex caudate-acuminate to acute, veins 13–15 pairs and abaxially prominent; central leaflet 7–17 × 2.5–8 cm. Panicles axillary, 1–3 per axil; peduncle 1.5–7 cm, densely short pubescent, sparsely glandular. Calyx slightly 2-lipped, 5-dentate, outside pubescent and glandular, inside glabrous. Corolla pink, ca. 1 cm, tube ca. 6 mm, both surfaces pubescent especially on central lobe of lower lip. Stamens slightly exerted; filaments pubescent on basal half; anthers divaricate. Ovary glabrous, apically glandular. Style as long as corolla tube. Fruit globose, ca. 1 cm in diam. Fl. Jun, fr. Oct.

Dense forests in moist valleys; 1300–2400 m. Guangxi, Guizhou, Xizang, Yunnan [Myanmar].

12. *Vitex vestita* Wallich ex Schauer in A. de Candolle, Prodr. 11: 692. 1847.

黄毛牡荆 huang mao mu jing

Shrubs or small trees, 1–5(–8) m tall. Branchlets densely yellow-brown pubescent when young, glabrescent. Leaves 3-foliolate; petiole 2–6 cm; petiolules ca. 1 cm; leaflets elliptic-oblong to elliptic, membranous, abaxially softly tawny pubescent villous on veins and glandular, adaxially sparsely hispid and glandular dotted, base cuneate to rounded, margin entire or sparsely serrate above middle, apex acuminate to acute; central leaflet largest, 2.5–15 × 1.5–8 cm. Cymes axillary, sometimes to 3 per axil, 2.5–4 cm, dichotomous or trichotomous, tawny pubescent; peduncle shorter than petioles, densely pilose; bracts linear, pilose. Calyx with a tube ca. 3 mm, minutely 5-dentate to subtruncate, outside densely pubescent and glandular. Corolla yellowish, tube slender and 1–1.2 cm, outside yellow glandular, inside glabrous except villous below insertion of stamens. Stamens included. Ovary apex densely glandular. Fruiting calyx enlarged, saucer-shaped. Drupes black, obovoid, 5–9 × 4–8 mm. Fl. Jun–Sep, fr. Oct–Nov.

Mixed forests on mountain slopes; 800–1800 m. Yunnan [SE Asia].

Some Chinese collections are described as having white or pink flowers.

13. *Vitex yunnanensis* W. Smith, Notes Roy. Bot. Gard. Edinburgh 9: 141. 1916.

滇牡荆 dian mu jing

Shrubs or small trees, 1–5 m tall. Branchlets and peduncles densely minutely tomentose when young, subglabrescent. Leaves 3–5-foliolate; petiole 1–6 cm, yellow-brown minutely tomentose; petiolules 2–4 mm; leaflets elliptic-oblong, ovate-oblong, or ovate, abaxially greenish to

yellowish green and yellow glandular pilose on veins, adaxially green and sparsely yellow glandular pubescent on veins, base broadly cuneate to subrounded, margin subentire and usually ciliate, apex acuminate, acute, or obtuse; central leaflet 2.5–5.5 cm. Cymes 3–7-flowered; peduncle shorter than petioles. Calyx campanulate, ca. 3 mm, minutely 5-dentate, teeth broadly triangular, outside pilose and glandular. Corolla white flushed with pink or blue, to 1.7 cm; tube ventricose, outside puberulent and glandular, villous at insertion of filaments. Stamens slightly exerted. Ovary and style glabrous. Fruit globose, ca. 1 cm in diam. Fl. and fr. May–Nov.

- Mixed forests on mountain slopes; 1800–3500 m. Sichuan, Yunnan.

14. *Vitex duclouxii* Dop, Bull. Soc. Hist. Nat. Toulouse 57: 208. 1928.

金沙荆 jin sha jing

Shrubs or trees; bark dark brown. Branchlets glandular yellow-brown pubescent when young, glabrescent. Leaves (3–)5-foliolate; petiole 2–6 cm; petiolules 1–1.5 cm; leaflets oblong-lanceolate, abaxially pilose on veins densely so when young, adaxially subglabrous, both surfaces yellowish glandular, base cuneate and slightly oblique, margin entire, apex acuminate to nearly caudate; central leaflet 5–10 × 2–3 cm. Cymes dichotomous, pubescent to subglabrous; bracts small. Calyx campanulate, ca. 4 mm, outside pubescent and densely glandular; teeth 5, triangular. Corolla ca. 1 cm, 2-lipped, tube ca. 6 mm, lower lip 3-lobed, upper lip 2-lobed and larger than lower lip, outside puberulent and glandular except at base, inside puberulent on lower lip and villous at insertion of filaments. Stamens included. Ovary glabrous. Style as long as stamens. Fruit globose, ca. 1 cm in diam.

- Thickets along streams; 1000–2300 m. Sichuan, Xizang (Médog), Yunnan.

