

AUCUBACEAE

桃叶珊瑚科 tao ye shan hu ke

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Trees or shrubs, dioecious; branches opposite, cylindrical. Leaves opposite, estipulate, petiolate, simple, pinnately veined; leaf blade abaxially light green, adaxially deep green and shiny, dark brown when dry, some species variegated with yellow or white markings, thickly leathery to papery, pubescent or glabrous, margin serrate or dentate, rarely entire. Inflorescences terminal, paniculate or racemose-paniculate. Flowers 4-merous, unisexual, actinomorphic, subtended by 1 or 2 bracteoles. Stamens 4, alternate petals. Ovary inferior, carpel 1, locule 1; ovule 1, pendulous; style short, thick; stigma capitate, straight or curving, slightly 2–4-lobed. Fruit drupes, fleshy, red when mature, black when dry, crowned with persistent calyx teeth, style, and stigma.

One genus and ten species: Bhutan, China, N India, Japan, Korea, Myanmar, Sikkim, Vietnam; ten species (seven endemic) in China.

Aucuba, previously placed in the Cornaceae, has been included in the Garryaceae on the basis of molecular, chemical, and morphological evidence (Bremer et al., *Pl. Syst. Evol.* 229: 137–169. 2001). *Aucuba* and *Garrya* Douglas ex Lindley, the latter genus from Central America (including the Greater Antilles) and W North America, are sister taxa with high support (Angiosperm Phylogeny Group, *Bot. J. Linn. Soc.* 141: 399–436. 2003). It is here preferred to treat the two genera in separate families: Aucubaceae and Garryaceae.

Soong Tzepu. 1990. *Aucuba*. In: Fang Wenpei & Hu Wenkuang, eds., *Fl. Reipubl. Popularis Sin.* 56: 6–20.

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1. AUCUBA Thunberg, Nov. Gen. Pl. 3: 61. 1783.

桃叶珊瑚属 tao ye shan hu shu

Trees or shrubs, 1–10 m tall; branches with conspicuous leaf scars, often pubescent when young, glabrous when old. Leaf blade usually green or sometimes variegated with yellow, yellowish, or white spots, variable, from lanceolate to obovate, pubescent or glabrous, veins raised abaxially, often impressed adaxially, lateral veins usually connected before reaching margin, extending to apex of marginal teeth, margin serrate, glandular serrate, or dentate, rarely entire. Staminate inflorescences (2–)7–15 cm, paniculate or racemose-paniculate, pyramidal, or cylindrical. Carpellate inflorescences panicles, shorter, 1–5 cm. Flowers: calyx lobes minute, triangular or slightly orbicular; petals free, valvate, purplish red, yellow, or green, oblong or ovate, apex acuminate or caudate. Staminate flowers: filaments awl-shaped; anthers dorsifixed, rarely versatile, locules 2, rarely locule 1, dehiscing by longitudinal slits; floral disk fleshy, slightly 4-lobed. Carpellate flowers; sepals and petals articulate at base of ovary, subtended by 1 or 2 bracteoles. Fruit cylindrical or ovoid. $2n = 16, 32$.

Geographical distribution is the same as that of the family.

The treatment here largely follows Soong (FRPS, loc. cit.). Several species are difficult to distinguish from each other, as the characters used to separate them are variable. The margins of the leaves, used in the key, are not consistently reliable (or stable) features. A detailed molecular and morphological study of *Aucuba* by Tetsuo Ohi, of the Koishikawa Botanical Garden of the University of Tokyo, is currently under way and will almost certainly result in a treatment different from the one presented here.

Some species are used medicinally in folk remedies. Species of *Aucuba* are excellent garden plants in warm-temperate areas because of their evergreen habit, shiny leaves, and brightly colored fruit.

- 1a. Staminate inflorescences paniculate; apex of petals shortly acuminate (ca. 0.5 mm); stamens 3–4 mm; flowers yellowish green, yellow, or purplish red; leaves thickly leathery to subleathery.
 - 2a. Leaves leathery or subleathery, sometimes variegated with bright yellow spots; flowers purplish red 2. *A. japonica*
 - 2b. Leaves thickly leathery to subleathery, all green; flowers yellowish green, yellow, or rarely purplish red.
 - 3a. Anthers fused into 1 locule; leaves subleathery 4. *A. eriobotryifolia*
 - 3b. Anther locules 2; leaves leathery or thickly leathery.
 - 4a. Leaf blade 10–20 × 3.5–8 cm; petiole 2–4 cm; staminate inflorescence pyramidal; flowers sparse; petals 3–4 × 2–2.5 mm 1. *A. chinensis*
 - 4b. Leaf blade 13–20 × 3–5.5 cm; petiole 2–2.5 cm; staminate inflorescences subcylindrical; flowers dense; petals ca. 5 × 1–3 mm 3. *A. confertiflora*
- 1b. Staminate inflorescences racemose-paniculate; apex of petals caudate (1–2.5 mm); stamens 1–2 mm; flowers purplish red, rarely green; leaves thickly papery to thinly leathery.
 - 5a. Margins of leaves undulate or denticulate.
 - 6a. Leaves undulate, veins on adaxial surface inconspicuous, leaf blade broadly elliptic or obovate-elliptic, 11–18 × 4–10 cm; apical ca. 2.5 mm of petals often cirrhose 7. *A. filicauda*
 - 6b. Leaves with 8–14 pairs teeth, veins conspicuously impressed adaxially, leaf blade oblong, lanceolate, oblanceolate, or obovate-oblong, 5–16 × 1.5–6 cm; apex of petals caudate.

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- 7a. Fruit stalk straight, not expanded at junction with fruit; leaf blade 1.5–6 cm wide; staminate flowers green; apex of petals caudate for 1–1.5 mm 5. *A. chlorascens*
- 7b. Fruit stalk expanded at junction with fruit; leaf blade 2–3.7 cm wide; staminate flowers purplish red; apex of petals caudate for ca. 1 mm 6. *A. robusta*
- 5b. Margins of leaves serrate.
 - 8a. Margins of leaves sparsely serrulate; leaf blade papery or thinly leathery, often narrowly elliptic, rarely oblong-lanceolate, 10–15(–20) × 3–5(–7) cm 8. *A. himalaica*
 - 8b. Margins of leaves serrate or coarsely serrate; leaf blade thickly papery or subleathery, often obcordate or obovate, rarely oblong, 2.5–16 × ca. 1.5 cm.
 - 9a. Margins of leaves serrate; leaf blade irregularly variegated with white or light yellow, obovate, rarely oblong, 2.5–8 × 2–4.5 cm 9. *A. albopunctifolia*
 - 9b. Margins of leaves coarsely serrate; leaf blade not variegated, obcordate or obovate, 8–14 × 4.5–8 cm 10. *A. obcordata*

1. *Aucuba chinensis* Bentham, Fl. Hongk. 138. 1861.

桃叶珊瑚 tao ye shan hu

Trees or shrubs, 3–6(–12) m tall; branches green, dichotomous, stout, smooth. Petiole 2–4 cm, stout, smooth; leaf blade abaxially light green, adaxially deep green, elliptic to broadly elliptic, rarely obovate-elliptic or linear-lanceolate, 7–25 × 1.5–8 cm, leathery or thickly leathery, midvein raised abaxially, conspicuous adaxially; lateral veins 6–8(–10) pairs, sometimes emerging at right angle from midvein, base broadly cuneate or cuneate, slightly oblique, margin slightly revolute, often serrate or glandular dentate with 5–8 teeth, apex acute or cuspidate. Staminate inflorescences loosely paniculate, 5–13 cm; branches densely pubescent. Carpellate inflorescence shortly paniculate, shorter than staminate, 2.5–5 cm; branches densely pubescent. Staminate flowers: calyx 4-dentate, glabrous or sparsely pubescent; petals 4, green (in Feb), yellow, or purplish red, oblong or ovate, 3–4 × 2–2.5 mm, apex cuspidate, rolled outward; stamens 4, ca. 3 mm, surrounding disk, anthers yellow, locules 2; disk fleshy, slightly 4-angled; pedicel ca. 3 mm, pubescent; bracteole 1, lanceolate, ca. 3 mm. Carpellate flowers yellow green or yellowish; calyx and petals similar to staminate flowers, but apex of petals acute; ovary cylindrical; style stout; stigma capitate, slightly leaning to one side; disk fleshy, slightly 4-lobed; bracteoles at base of pedicel 2, lanceolate, 4–6 mm. Fruit bright red or dark red, cylindrical or ovoid, 1.4–1.8 cm, 8–10(–12) mm in diam. Fl. Jan–Feb, fr. Feb, often with fruit from preceding two years. $2n = 16$.

Forests; 300–1000 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Sichuan, Taiwan, Yunnan [Myanmar, N Vietnam].

- 1a. Leaves leathery, elliptic or broadly elliptic,
rarely obovate, 3–8 cm wide 1a. var. *chinensis*
1b. Leaves thickly leathery, linear lanceolate,
1.5–3.5 cm wide 1b. var. *angusta*

1a. *Aucuba chinensis* var. *chinensis*

桃叶珊瑚(原变种) tao ye shan hu (yuan bian zhong)

Aucuba chinensis subsp. *omeiensis* (W. P. Fang) W. P. Fang & T. P. Soong; *A. chinensis* var. *variegata* Dombrain; *A. grandiflora* C. Y. Wu; *A. omeiensis* W. P. Fang.

Leaf blade elliptic or broadly elliptic, rarely obovate, 10–20 × 3–8 cm, leathery.

Broad-leaved evergreen forests; below 1000 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Sichuan, Taiwan, Yunnan [Myanmar, N Vietnam].

Plants with the following features: flower ca. 1 cm in diam.; calyx cupular; petals ovate, abaxially glabrous, adaxially pulverulous-scurfy; leaves oblong, midvein sparsely strigose, margin glandular spinose; fruit oblong, ca. 1.2 cm in diam., have been described as *Aucuba grandiflora* C. Y. Wu (Fl. Yunnan. 5: 760. 1991), but we retain them here under *A. chinensis* var. *chinensis* until the genus can be studied in more detail.

1b. *Aucuba chinensis* var. *angusta* F. T. Wang, Contr. Inst. Bot. Natl. Acad. Peiping 6: 201. 1949.

狭叶桃叶珊瑚 xia ye tao ye shan hu

Aucuba chinensis f. *angustifolia* Rehder; *A. yunnanensis* C. Y. Wu; *A. yunnanensis* var. *pubigera* C. Y. Wu & S. Y. Pao.

Leaf blade narrowly lanceolate or often linear-lanceolate, 7–25 × 1.5–3.5 cm, thickly leathery.

- Forests; 300–500 m. Guizhou, Yunnan.

2. *Aucuba japonica* Thunberg, Nov. Gen. Pl. 3: 61. 1783.

青木 qing mu

Shrubs 1–3 m tall; branches dichotomous, green, stout. Leaf blade abaxially light green, sometimes variegated with yellow spots, adaxially shiny green, narrowly elliptic to ovate-elliptic, seldom widely lanceolate, 8–20 × 5–12 cm, leathery, base subrounded or broadly cuneate, margin with 2–4(–6) pairs of teeth on upper half, or entire, apex acuminate. Staminate inflorescences paniculate, 7–10 cm, pubescent. Carpellate inflorescences shortly paniculate, (1–)2–3 cm, pubescent. Staminate flowers pubescent; petals subovate or ovate-lanceolate, 3.5–4.5 × 2–2.5 mm, apex shortly cuspidate, ca. 0.5 mm; stamens ca. 1.25 mm; pedicel 3–5 mm. Carpellate flowers purple red or dark red, abaxially glabrous; petals subovate to elliptic-lanceolate, apex caudate; ovary sparsely pubescent; style stout; stigma oblique (or leaning to one side; pedicel 2–3 mm, pubescent, bracteoles 2. Fruit dark purple or black, ovoid, ca. 2 cm × 5–7 mm in diam. Fl. Mar–Apr. $2n = 16, 32$.

Moist rich soils in valleys with dense forests, thickets, streamsides, near shaded moist rocks. Taiwan, S Zhejiang; also widely culti-

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vated as an ornamental in parks and gardens throughout China [Japan, Korea].

- 1a. Leaf blade green throughout, not variegated 2a. var. *japonica*
1b. Leaf blade irregularly variegated with yellow or light yellow spots 2b. var. *variegata*

2a. *Aucuba japonica* var. *japonica*

青木(原变种) qing mu (yuan bian zhong)

Eubasis dichotoma Salisbury.

Shrubs ca. 3 m tall. Leaves green.

Moist rich soils in valleys with dense forests, thickets, streamsides, near shaded moist rocks. Taiwan, S Zhejiang [Japan, Korea].

The wood is used to make walking sticks and pipes for smoking.

2b. *Aucuba japonica* var. *variegata* Dombroin, Fl. Mag. (London) 5: t. 277. 1866.

花叶青木 hua ye qing mu

Shrubs 1–1.5 m tall. Leaves variegated with yellow or light yellow spots.

Widely cultivated as an ornamental in parks and gardens throughout China [Japan, Korea].

3. *Aucuba confertiflora* W. P. Fang & T. P. Soong, J. Sichuan Univ., Nat. Sci. Ed. 1982(1): 68. 1982.

密花桃叶珊瑚 mi hua tao ye shan hu

Trees, 2–4 m tall; branches brown or dark brown, glabrous. Petiole 2–2.5 cm, stout; leaf blade elliptic or oblong, 13–20 × 3–5.5 cm, thickly leathery, abaxially densely pubescent, midvein and lateral veins densely appressed hairy, other parts with short soft trichomes, adaxially glabrous, all veins conspicuously raised abaxially, midvein slightly impressed, and lateral veins and veins slightly raised adaxially, base cuneate, margin slightly revolute, with 5–11 teeth, apex acuminate. Staminate inflorescences paniculate, cylindrical, ca. 7 cm, densely flowered; peduncle densely pubescent with soft yellow trichomes. Carpellate inflorescences shortly paniculate, ca. 5 cm; peduncle and pedicels sparsely pubescent with thick trichomes. Staminate flowers green (in Feb); calyx lobes 4, triangular-ovate, pubescent; petals 4, dark purplish red, oblong, ca. 5 × 1.5–3 mm, apex shortly cuspidate; filaments ca. 3 mm, anthers ca. 1 mm; pedicel ca. 1 mm, densely pubescent with yellow soft trichomes. Carpellate flowers: calyx lobes 4, ± triangular, longer than in staminate flowers; petals not seen; ovary cylindrical, ca. 5 mm, sparsely pubescent; style and stigma ca. 1 mm; pedicel ca. 3 mm, densely pubescent. Fl. Feb–Mar, fr. not seen.

- Forests; 1000–1600 m. SE Yunnan.

4. *Aucuba eriobotryifolia* F. T. Wang, Contr. Inst. Bot. Natl. Acad. Peiping 6: 206. 1949.

琵琶叶珊瑚 pi pa ye shan hu

Aucuba chinensis Benth. f. *subintegra* H. L. Li.

Trees 8–13 m tall. Young branches pubescent, second year branches glabrous. Leaves elliptic or obovate-elliptic, 12–20 × 4–8 cm, thinly leathery, with impressed veins adaxially, abaxially pubescent with scattered fine trichomes on midvein, adaxially glabrous, base rounded, margin often with 4–6 pairs of serrations, rarely entire, apex cuspidate. Staminate inflorescences ca. 7 cm, densely pubescent with fine appressed trichomes or yellow tomentose; bracteole 1, ovate, membranous. Staminate flowers: petals green or light yellow, oblong, 4–4.5 × 1.5–1.9 mm, apex shortly acuminate; stamens subequal to petals, anther locule 1. Carpellate flowers not seen. Fruit red, ovoid, sparsely pubescent or glabrous, 1.4–1.5 cm, 7–8 mm in diam. Fl. Feb, fr. Nov–Dec.

- Forests; 1300–1600(–2400) m. W Yunnan.

5. *Aucuba chlorascens* F. T. Wang, Contr. Inst. Bot. Natl. Acad. Peiping 6: 201. 1949.

细齿桃叶珊瑚 xi chi tao ye shan hu

Shrubs or trees, to 7 m tall; branches brownish black, densely pubescent. Petiole 1–2 cm, slightly expanded at base, sparsely pubescent; leaf blade oblong-lanceolate to oblanceolate, 5–15 × 1.5–6 cm, papery to thinly leathery, pubescent, abaxially with fine appressed trichomes when young, old leaves only sparsely pubescent on midvein and lateral veins, veins slightly raised abaxially, slightly impressed adaxially, base cuneate, margin revolute, with 8–14 pairs of inconspicuous teeth on upper half, apex acuminate. Staminate inflorescence paniculate, 5–6 cm; rachis and pedicels sparsely pubescent; bracteole 1 per pedicel, ovate-lanceolate, membranous. Carpellate inflorescences 1–2 cm; bracteole 2

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per pedicel, linear-lanceolate, membranous, pubescent. Staminate flowers: calyx 4-dentate; petals green, ovate, ca. 2–2.5 × 2–2.5 mm, margin fringed with glandular trichomes apically, apex caudate for 1–1.5 mm; stamens ca. 1.2 mm. Carpellate flowers: calyx and petals similar to those in staminate flowers; style short, thick; stigma capitate, leaning to one side; ovary cylindrical, pubescent with fine trichomes. Fruit cylindrical, 1.2–1.4 × 0.8–1 cm, crowned by persistent disk, style, and stigma. Fl. Feb–Mar, fr. Oct–Dec.

- Forests; 1400–2800 m. Yunnan.

6. *Aucuba robusta* W. P. Fang & T. P. Soong, J. Sichuan Univ., Nat. Sci. Ed. 1982(1): 70. 1982.

粗梗桃叶珊瑚 cu geng tao ye shan hu

Shrubs, height unknown; branches stout, grayish brown or grayish yellow, pubescent. Petiole stout, 1.5–2 cm, sparsely pubescent; leaf blade abaxially whitish green, often oblong or lanceolate, rarely obovate-oblong, 10–16 × 2–3.7 cm, papery, adaxially sparsely pubescent, all veins raised except midvein adaxially, base cuneate or broadly cuneate, margin serrulate or denticulate with teeth ending in gland at end of vein, apex acuminate. Staminate inflorescences dark purple, ca. 2 cm (in Jan. before blooming). Carpellate inflorescences not seen, infructescences ca. 3.5 cm. Staminate flowers: calyx lobes 4, undulate; petals ovate, ca. 2 × 1.5–1.8 mm, apex caudate for ca. 1 mm; stamens ca. 1 mm. Carpellate flowers not seen. Fruit light green (from notes on labels), dark brown when dry, oblong, ca. 1.2 cm, ca. 0.5 cm in diam., base slightly pubescent; fruiting pedicel grayish yellow, stout, pubescent, conspicuously expanded at juncture with fruit. Fl. Jan–Mar, fr. Jan.

- Dense forests in valleys; 800–900 m. Guangxi.

Aucuba robusta is similar to *A. chlorascens*, but differs in having branches and fruiting pedicels grayish brown or grayish yellow, stouter, and conspicuously expanded at the junction with the fruit; the flowers are dark purple and the stigma is slightly 4-lobed.

7. *Aucuba filicauda* Chun & F. C. How, Acta Phytotax. Sin. 7: 70. 1958.

纤尾桃叶珊瑚 xian wei tao ye shan hu

Shrubs to 4 m tall; branches yellow to blackish brown, pubescent when young. Petiole stout, 1–3 cm, pubescent, with short thick trichomes; leaf blade broadly to narrowly elliptic or obovate-elliptic, 9–18 × 2.5–10 cm, papery to leathery, abaxially pubescent, with thick trichomes on midvein and lateral veins, adaxially glabrous, lateral veins 6–8 pairs, slightly impressed adaxially, base slightly oblique, margin glandular denticulate or slightly undulate-serrulate on apical half, apex long cuspidate for 1–1.5 cm. Staminate inflorescences racemose panicles, 7–15 cm, pubescent, with appressed thick trichomes. Carpellate inflorescences shortly paniculate, 2–5 cm, stout, pubescence with yellow trichomes. Staminate flowers: calyx cup-shaped, glabrous or sparsely pubescent; calyx lobes short; petals purplish red, ovate, 3.5–4 mm, apex cirrhose for ca. 2.5 mm, fringed by short trichomes; floral disk slightly 4-lobed; stamens short; bracteole of pedicel 1, linear, ca. 1.5 mm. Carpellate flowers: calyx and petals as in staminate flowers; ovary conical, pubescent, with thick appressed trichomes; stigma slightly 4-lobed. Fruit green when young, mature fruit not seen, ellipsoid, ovoid, or ovoid-oblong, 1.2–1.5 cm, 7–10 mm in diam., glabrous or slightly pubescent. Fl. Apr–May, fr. after Jul.

- Forests; 900–1900 m. Guangxi, Guizhou, Jiangxi, Yunnan.

1a. Leaves 11–18 × 4–10 cm; staminate inflorescences densely flowered, 9–15 cm

..... 7a. var. *filicauda*

1b. Leaves 9–13 × 2.5–3.5 cm; staminate

flowers sparsely flowered, 7–9 cm 7b. var. *pauciflora*

7a. *Aucuba filicauda* var. *filicauda*

纤尾桃叶珊瑚(原变种) xian wei tao ye shan hu (yuan bian zhong)

Aucuba cavinervis C. Y. Wu ex T. P. Soong.

Leaf blade broadly elliptic or obovate-elliptic, 11–18 × 4–10 cm, thickly papery. Staminate inflorescences 9–15 cm, densely flowered.

- Forests; 900–1100 m. Guangxi, Guizhou, Yunnan.

7b. *Aucuba filicauda* var. *pauciflora* W. P. Fang & T. P. Soong, J. Sichuan Univ., Nat. Sci. Ed. 1982(1): 69. 1982.

少花桃叶珊瑚 shao hua tao ye shan hu

Leaf blade narrowly elliptic, 9–13 × 2.5–3.5 cm, thinly papery. Staminate inflorescences 7–9 cm, sparsely flowered.

- Forests; 1200–1900. Guizhou, Jiangxi.

8. *Aucuba himalaica* J. D. Hooker & Thomson, Ill. Himal. Pl. t. 12. 1855.

喜马拉雅珊瑚 xi ma la ya shan hu

Trees or shrubs, 3–6(–8) m tall, 5–10 cm in diam.; young branches pubescent; old branches with white oblong lenticels and conspicuous leaf scars. Petiole 2–3 cm, pubescent with thick trichomes; leaf blade narrowly elliptic to elliptic, lanceolate, oblong-lanceolate, oblanceolate, or narrowly lanceolate, 10–15(–20) × (1.5–)3–5(–7) cm, papery, or thinly leathery, abaxially glabrous or pubescent with soft trichomes, or with both soft and stiff trichomes, or with soft trichomes only on midvein, or with thick trichomes on veins, adaxially glabrous, veins raised abaxially, conspicuously impressed adaxially, and connected before reaching margin, base cuneate, margin 4–7-serrulate or 7–9-serrulate on upper 1/3, apex cuspidate for 1–1.5(–3) cm or acuminate. Staminate inflorescences racemose panicles, 8–12(–13) cm, all parts purplish red, with dense soft trichomes when young, upper portion of trichomes purplish red; pedicel 2–2.5 mm, pubescent. Carpellate inflorescences (2–)3–5(–5.5) cm, with dense thick trichomes and reddish brown soft trichomes, all parts reddish purple. Staminate flowers: calyx slightly 4-lobed, lobes rounded, pubescent; petals narrowly ovate, 3–3.5 × ca. 2 mm, apex caudate for 1.5–2 mm; stamens 1–2.5 mm, filaments stout. Carpellate flowers: calyx and petals similar to those of staminate flowers; ovary pubescent with thick trichomes; style stout; stigma slightly 2-lobed; bracteoles 2. Fruit dark red, ovoid-oblong to subellipsoid, sparsely pubescent, 1–1.5 cm, 5–6 mm in diam. Fl. Mar–May, fr. Oct–May.

Forests; 500–1300 m. Guangdong, Guangxi, Guizhou, W Hubei, Hunan, S Shaanxi, Sichuan, Xizang, Yunnan, Zhejiang [Bhutan, N India, N Myanmar, Sikkim].

- 1a. Leaves elliptic, narrowly elliptic, lanceolate, or oblong-lanceolate, abaxially densely pubescent or only veins pubescent with thick trichomes.
- 2a. Staminate inflorescences 8–10(–13) cm; carpellate inflorescences 3–5 cm; fruit ovoid-oblong, 1–1.2 cm; abaxial leaf surface pubescent with thick trichomes on veins 8a. var. *himalaica*
- 2b. Staminate inflorescences ca. 12 cm; fruiting inflorescences 2–3 cm; fruit subellipsoid, ca. 1.5 cm; abaxial leaf surface densely pubescent with a mix of thin, soft, and stiff trichomes 8b. var. *pilossima*
- 1b. Leaves oblanceolate, narrowly lanceolate, or lanceolate, glabrous or abaxially pubescent with short, thin, and soft trichomes.
 - 3a. Leaves oblanceolate, densely pubescent with short, soft trichomes 8c. var. *oblanceolata*
 - 3b. Leaves narrowly lanceolate or lanceolate, glabrous or abaxially pubescent with short, soft trichomes on veins 8d. var. *dolichophylla*

8a. *Aucuba himalaica* var. *himalaica*

喜马拉雅珊瑚(原变种) xi ma la ya shan hu (yuan bian zhong)

Leaf blade elliptic or narrowly elliptic, rarely oblong-lanceolate, 10–15(–20) × 3–5(–7) cm, abaxially pubescent with thick trichomes on veins, margin with 7–9 serrulations on apical 1/3, apex caudate for 1–1.5 cm.

Subtropical broad-leaved evergreen forests, mixed evergreen and deciduous broad-leaved forests; 500–1200 m. N Guangxi, W Hubei, N Hunan, S Shaanxi, Sichuan, Xizang, Yunnan, Zhejiang [Bhutan, N India, N Myanmar, Sikkim].

8b. *Aucuba himalaica* var. *pilossima* W. P. Fang & T. P. Soong, Fl. Sichuan. 1: 474. 1981.

密毛桃叶珊瑚 mi mao tao ye shan hu

Leaf blade lanceolate or oblong-lanceolate, 10–15(–20) × 3.0–5.5 cm, abaxially surface densely pubescent with short, soft, and stiff trichomes, margin sparsely denticulate, apex caudate for 1–1.5 cm.

- Forests; 1000–1300 m. W Hubei, W Hunan, S Shaanxi, Sichuan.

8c. *Aucuba himalaica* var. *oblanceolata* W. P. Fang & T. P. Soong, Fl. Sichuan. 1: 474. 1981.

倒披针叶珊瑚 dao pi zhen ye shan hu

Aucuba mollifolia C. Y. Wu; *A. oblanceolata* (W. P. Fang & T. P. Soong) C. J. Qi.

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Leaf blade oblanceolate, 11–17 × 3–5 cm, abaxially densely pubescent with short, soft trichomes, margin sparsely denticulate, apex cuspidate for 1.5–3 cm.

- Forests; ca. 700 m. N Hunan, Sichuan.

8d. *Aucuba himalaica* var. *dolichophylla* W. P. Fang & T. P. Soong, Fl. Sichuan. 1: 475. 1981.

长叶珊瑚 chang ye shan hu

Leaf blade narrowly lanceolate or lanceolate, 9–18 × 1.5–3.5 cm, glabrous or only midvein of abaxial surface with short, soft trichomes, margin 4–8-serrulate, apex acuminate.

- Forests; ca. 1000 m. Guangdong, Guangxi, Guizhou, W Hubei, Hunan, Sichuan, Zhejiang.

9. *Aucuba albopunctifolia* F. T. Wang, Contr. Inst. Bot. Natl. Acad. Peiping 6: 203. 1949.

斑叶珊瑚 ban ye shan hu

Shrubs, to 2 m tall, rarely trees to 6(–7) m tall; young branches green, old branches blackish brown, glabrous. Petiole 7–20 mm, with fine appressed scattered trichomes when young, glabrescent; leaf blade abaxially light green, adaxially shiny green, variegated with white and yellow spots, obovate, oblong, or narrowly lanceolate, 2.5–14(–16) × 1.5–4.5 cm, thickly papery or subleathery, both surfaces glabrous, abaxially papillose, veins raised abaxially, slightly impressed adaxially, base cuneate or subrounded, apex acute or acuminate. Staminate inflorescences racemose-paniculate, loosely flowered; pedicels with appressed short trichomes. Carpellate inflorescences 2–3 cm, rachis, pedicels, and calyx tube sparsely pubescent with thick trichomes. Staminate flowers: petals light to dark purple. Carpellate flowers not seen. Fruit green when young, shiny red when mature, ovoid, ca. 9 × 6 mm. Fl. Mar–Apr, fr. Jan–Apr.

- Forests; 1300–2100 m. Guangxi, Guizhou, W Hubei, Hunan, Sichuan, Zhejiang.

1a. Leaves obovate, rarely oblong 9a. var. *albopunctifolia*

1b. Leaves narrowly lanceolate 9b. var. *angustula*

9a. *Aucuba albopunctifolia* var. *albopunctifolia*

斑叶珊瑚(原变种) ban ye shan hu (yuan bian zhong)

Leaves obovate, rarely oblong, 2.5–8(–16) × 2–4.5 cm.

- Forests; 1300–1800 m. Guangxi, Guizhou, W Hubei, Sichuan.

9b. *Aucuba albopunctifolia* var. *angustula* W. P. Fang & T. P. Soong, Fl. Sichuan. 1: 475. 1981.

窄斑叶珊瑚 zhai ban ye shan hu

Leaves narrowly lanceolate, 11–15 × 1.5–3 cm.

- Forests; 1300–2100 m. Hunan, Sichuan, Zhejiang.

10. *Aucuba obcordata* (Rehder) Fu ex W. K. Hu & T. P. Soong in W. P. Fang, Fl. Sichuan. 1: 395. 1981.

倒心叶珊瑚 dao xin ye shan hu

Aucuba chinensis Bentham f. *obcordata* Rehder in Sargent, Pl. Wilson. 2: 572. 1916; *A. albopunctifolia* var. *obcordata* (Rehder) F. T. Wang; *A. chinensis* var. *fongfangshanensis* J. C. Liao et al.

Shrubs or trees, 1–4 m tall; branches blackish brown, smooth, glabrous. Petiole pubescent with thick trichomes; leaf blade often obcordate or obovate, (4–)8–14 × (2–)4.5–8 cm, thickly papery, rarely subleathery, veins raised abaxially, slightly impressed adaxially, base narrowly cuneate, margin coarsely dentate, sinus between teeth rounded, apex truncate or obcordate, caudate for 1.5–2 cm. Staminate inflorescences racemose-paniculate, 8–9 cm, sparsely flowered; pedicels 1–2 mm, pubescent. Carpellate inflorescences paniculate, 1.5–2.5 cm; pedicel to 6 mm at fruiting. Staminate flowers sparse; petals purplish red, apex caudate; filaments thick. Carpellate flowers: petals similar to staminate flowers. Fruit dark red, ovoid, 1–1.5 cm, 6–9 mm in diam. Fl. Mar–Apr, fr. Sep–Nov or later.

- Forests; ca. 1300 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, S Shaanxi, Sichuan, N Yunnan.