

14. APOROSA Blume, Bijdr. 514. 1825–1826.

银柴属 yin chai shu

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*Scepa* Lindley.

Trees or shrubs, dioecious, rarely monoecious; indumentum of simple hairs. Leaves alternate; stipules caducous; petiole apex usually glandular; leaf blade simple, margin entire or sparsely denticulate, venation pinnate. Inflorescences axillary, solitary or clustered spikes or racemes, many flowered, male inflorescences longer than female, bracteate; pedicels short. Male flowers apetalous, without disk; sepals 3–6, nearly equal, membranous, imbricate; stamens 2 or 3, rarely 5 or 8; filaments free, as long as or longer than sepals; anthers small, longitudinally dehiscent; pistillode very small or absent. Female flowers: sepals 3–6, shorter than ovary; ovary 2(–4)-locular; ovules 2 per locule; styles 2(–4), apex shallowly bifid, rarely papillate or fringed. Fruit a drupelike capsule, irregularly dehiscent when mature and dry, 1- or 2-seeded. Seeds not strophiolate; endosperm fleshy; cotyledon flattened and broad.  $x = 13$ .

About 80 species: India and Sri Lanka to SW China, Indonesia, and Malaysia; four species in China.

1a. Ovary and fruits pubescent or tomentose.

2a. Leaves mostly broadly ovate or elliptic, base truncate or cordate, sometimes obtuse, abaxially uniformly hairy; bracts semiorbicular; male sepals obovate; capsule tomentose ..... 1. *A. villosa*

2b. Leaves mostly narrowly ovate or elliptic, base usually  $\pm$  cuneate, abaxially glabrous or pilose only along veins; bracts ovate-triangular; male sepals oblong-ovate; capsule thinly pubescent ..... 2. *A. dioica*

1b. Ovary and fruits glabrous.

3a. Branches pubescent when young; leaf blade papery to leathery, margin entire; female sepals 4 ..... 3. *A. planchoniana*

3b. Branches glabrous when young; leaf blade membranous to thinly papery, margin sparsely glandular-crenulate; female sepals usually 3 ..... 4. *A. yunnanensis*

1. *Aporosa villosa* (Lindley) Baillon, Étude Euphorb. 645. 1858.

毛银柴 mao yin chai

*Scepa villosa* Lindley, Nat. Syst. Bot., ed. 2, 441. 1836; *Aporosa dioica* (Roxburgh) Müller Argoviensis var. *yunnanensis* (Pax & K. Hoffmann) H. S. Kiu; *A. glabrifolia* Kurz; *A. microcalyx* (Hasskarl) Hasskarl var. *yunnanensis* Pax & K. Hoffmann.

Shrubs or treelets 2–7 m tall, densely tomentose or pubescent throughout, but leaves sometimes glabrescent, especially adaxially. Stipules obliquely ovate; petiole 1–2 cm, 2-glandular at apex; leaf blade mostly broadly ovate or broadly elliptic, sometimes rotund to oblong-ovate, 8–13  $\times$  4.5–8 cm, leathery, base often truncate or cordate, sometimes obtuse, margin entire or sparsely repand-dentate, apex rounded or obtuse; lateral veins 6–8 pairs, prominent on both surfaces. Male flowers axillary in 1–2 cm spikes; bracts semiorbicular, 2–3 mm; sepals 3–6, ovate-triangular or ovate; stamens 2 or 3. Female flowers axillary in 2–7 mm long spikes; bracts narrower than male ones; sepals 3–6, ovate-triangular, apex acute; ovary ovoid, bilocular. Capsules ellipsoid, ca. 1 cm, shortly rostrate at apex, 1-seeded. Seeds elliptic, ca. 9 mm. Fl. and fr. almost throughout year.

Montane dense forests, valley scrub; 100–1500 m. Guangdong, Guangxi, Hainan, Yunnan [Cambodia, India, Laos, Myanmar, Thailand, Vietnam].

2. *Aporosa dioica* (Roxburgh) Müller Argoviensis in A. Candolle, Prodr. 15(2): 472. 1866.

银柴 yin chai

*Alnus dioica* Roxburgh, Fl. Ind., ed. 1832, 3: 580. 1832; *Aporosa aurita* (Tulasne) Miquel; *A. chinensis* (Champion ex Benth) Merrill; *A. leptostachya* Benth; *A. microcalyx* (Hasskarl) Hasskarl; *A. microcalyx* var. *chinensis* (Champion ex Benth) Müller Argoviensis; *A. microcalyx* var. *intermedia* Pax & K. Hoffmann; *A. roxburghii* Baillon; *Scepa aurita* Tulasne; *S. chinensis* Champion ex Benth; *S. stipulacea* Lindley; *Tetractinostigma microcalyx* Hasskarl.

Trees to 9 m tall, usually shrubby in secondary forest, ca. 2 m tall; branchlets hirtellous to glabrous. Stipules ovate-lanceolate, 4–6 mm; petiole 5–12 mm, sparsely pubescent, apex bilateral with 2 glands; leaf blade elliptic, narrowly ovate, oblong-elliptic, obovate, or oblanceolate, 6–12  $\times$  3.5–6 cm, leathery, glabrous and lucid adaxially, sparsely pubescent along nerves abaxially, base rounded or cuneate, margin entire or sparsely shallowly dentate, apex rounded to acute. Male flowers axillary in ca. 2.5  $\times$  0.4 cm spikes; bracts ovate-triangular, ca. 1 mm, pubescent outside; sepals usually 4, oblong-ovate; stamens 2–4, longer than sepals. Female flowers: sepals 4–6, triangular, margins ciliate; ovary ovoid, densely pubescent, bilocular; ovules 2 per locule. Capsules ellipsoid, 1–1.3 cm, pubescent, 2-seeded. Seeds subovate, ca. 9  $\times$  5.5 mm. Fl. and fr. almost throughout year.

Montane sparse forests or scrub; 200–1000 m. Guangdong, Guangxi, Hainan, Yunnan [Bhutan, India, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

3. *Aporosa planchoniana* Baillon ex Müller Argoviensis in A. Candolle, Prodr. 15(2): 475. 1866.

Fl. China 11: 215–216. 2008.

全缘叶银柴 *quan yuan ye yin chai*

*Aporosa lanceolata* Hance var. *murtonii* F. N. Williams.

Shrubs to 4 m tall; stem gray; branches slender, pubescent when young, glabrous at maturity. Stipules broadly ovate, caducous; petiole 7–10 mm, apex bilateral with 2 glands; leaf blade oblong-ovate, 6–9 × 2–3 cm, papery to leathery, glabrous on both surfaces, yellowish mottled, dull yellowish green when dry, maculate, base rounded to obtuse, margin entire, apex acuminate; lateral veins 6 or 7 pairs, curved ascending, anastomosing before margins. Male flowers ca. 0.7 mm in diam., 2–5-clustered into axillary spikes, 1–2 × ca. 0.2 cm; bracts obliquely elliptic, ca. 1 mm, concave inside, puberulent at base outside; sepals 4, slightly unequal, ovate, 0.5–0.8 mm, margins ciliate; stamens 2; anthers rotund, ca. 0.4 mm wide, introrse. Female flowers often in few-flowered clusters combined into spikes; peduncles axillary, 2–6 mm; sepals 4, triangular, ca. 1 mm, puberulent at base inside; ovary obovoid, ca. 6 mm, bilocular, glabrous; styles 2, bipartite. Capsules ovoid or ellipsoid, 9–10 × ca. 5 mm, usually 1-seeded. Fl. May–Sep, fr. Aug–Nov.

Montane sparse forests; 100–800 m. Guangxi, Hainan, Yunnan [Cambodia, India, Laos, Myanmar, Thailand, Vietnam].

**4. *Aporosa yunnanensis*** (Pax & K. Hoffmann) F. P. Metcalf, Lingnan Sci. J. 10: 486. 1931.

云南银柴 *yun nan yin chai*

*Aporosa wallichii* J. D. Hooker f. *yunnanensis* Pax & K. Hoffmann in Engler, Pflanzentr. 81(IV. 147. XV): 90. 1921.

Treelets up to 8 m tall; branches smooth, glabrous. Stipules caducous; petiole 1–1.3 cm, apex bilateral with 2 glands; leaf blade oblong, oblong-elliptic, or oblong-ovate to lanceolate, 6–20 × 2–8 cm, membranous to thinly papery, adaxially dark green, glabrous, and densely black-mottled, abaxially greenish and glabrous, or only young nerves puberulent, base obtuse or broadly cuneate, margin entire or sparsely glandular-dentate, apex caudate-acuminate; lateral veins 5–7 pairs, curved and anastomosing to before margins, elevated below. Male flowers in axillary 2–4 cm spikes; bracts triangular, ca. 1.2 mm wide, pubescent outside; sepals 3–5, oblong-obovate, pubescent outside; stamens 2. Female flowers in few-flowered to 8 mm spikes; sepals usually 3, triangular, pubescent outside; ovary ellipsoid, glabrous, bilocular; ovules 2 per locule; styles 2, bifid at apex. Capsules subglobose, 8–13 × 6–8 mm, red-yellow when mature, glabrous; styles usually persistent at apex. Seeds elliptic, black-brown. Fl. and fr. Jan–Oct.

Densely forested slopes, scrub; 200–1500 m. Guangdong, Guangxi, Guizhou, Hainan, Jiangxi, Yunnan [India, Myanmar, Thailand, Vietnam].

Fl. China 11: 215–216. 2008.