

10. ITOA Hemsley, Hooker's Icon. Pl. 27: t. 2688. 1901.

梔子皮属 zhi zi pi shu

Mesaulosperma Slooten.

Trees, dioecious (or ?monoecious), evergreen. Leaves usually alternate, sometimes subopposite; stipules early caducous; petiole long, without glands at apex nor along length; leaf blade pinnate-veined, lateral veins closely set, mostly 1(–2) cm apart, margin glandular-serrate or glandular-crenate, sometimes minutely so. Flowers unisexual, hypogynous; staminate flowers in erect, terminal panicles; pistillate flowers 1 to few in short terminal or axillary racemes; bracts present; bracteoles 1 pair per pedicel, usually caducous. Pedicels not obviously articulate in dried material. Sepals appearing 3- or 4-merous in bud, in fact to 5-merous at anthesis, nearly free, valvate, ovate, with base appearing ± cordate when sepal erect, texture rather thick, margins slightly conduplicate. Petals absent. Disk glands absent. Staminate flowers: stamens many; filaments free, filiform; anthers ellipsoid to oblong, basifixed, connective usually curved, bringing both locules to face in same direction (toward periphery of flower); abortive ovary present. Pistillate flowers: ovary superior, 1-loculed; placentas 6–8, rarely 5, filiform, finally woody, persistent; ovules numerous; styles 6–8, very short, connate, forming a short longitudinally ribbed column; stigmatic branches (4–)6–8, spreading or strongly reflexed against ovary, irregularly palmately lobed; staminodes many, extragynoecial, like stamens but very much reduced. Capsule ovoid or ellipsoid, large, woody, tomentose, outer layer probably finally dehiscent; valves (5 or)6–8, fusiform, splitting from apex and base and remaining attached by woody persistent placental strips; styles caducous. Seeds many, arranged vertically in capsule, winged; wing broad, flat, thin, triangular, squarish or rectangular, completely surrounding seed; seed proper small.

Two species: Asia; one species in China.

Itoa has been reported as dioecious (e.g., Sleumer, Flora Males., ser. 1, 5(1): 12. 1954) but might also be monoecious. *Hoogland 5079*, a specimen of *I. stapfii* (Koorders) Sleumer from New Guinea, has a short raceme bearing a pistillate flower with young fruit developing, and a staminate flower with pollen-bearing anthers. In dried specimens of *Itoa* seen for the present account, the majority of flowers were in bud; those dissected contained stamenlike structures that may be stamens or staminodes.

1. *Itoa orientalis* Hemsley, Hooker's Icon. Pl. 27: t. 2688. 1901.

梔子皮 zhi zi pi

Trees, 8–12 m tall; bark gray; twig tips densely pubescent, branchlets finally glabrous. Leaves usually alternate, sometimes subopposite or clustered at apices of branches; petiole 2–6 cm, pubescent with short spreading hairs or glabrous; leaf blade greenish abaxially, deep green adaxially, narrowly to broadly elliptic, oblong-elliptic, or ovate, large, 13–40 × 6–18 cm, thinly leathery, abaxially densely pubescent with hairs rather long (ca. 0.5 mm) and spreading, or glabrous, adaxially initially pubescent, especially along midvein and main veins, finally glabrous, midvein raised abaxially, slightly impressed adaxially, lateral veins 10–26 pairs, base obtuse to rounded, margin serrate to serrulate, teeth obtuse, leaf apex usually obtuse to rounded, contracting abruptly to a short acumen, or apiculate, rarely acute. Inflorescences paniculate or racemose; rachises, pedicels, and abaxial surfaces of bracts densely pubescent to tomentose, hairs spreading, brownish when dry, short; bracts lanceolate, 5–6 mm. Flowers unisexual. Sepals 3 or 4, triangular-ovate, 0.6–1.5 cm, outside tomentose, hairs yellowish when dry. Staminate flowers: arranged in erect terminal pubescent panicles 4–8(–15) cm; stamens 120–160, 3–6 mm, glabrous; filaments ca. 5 mm; anthers oblong, ca. 1 mm. Pistillate flowers: solitary at apices of branches; ovary globose; styles (4–)6–8, very short; stigmas (4–)6–8, ca. 1 cm, palmately branched; branches irregularly lobed, flattened, tortuous, shortly pubescent beneath, glabrous above. Capsule ovoid, to 9 × 6 cm, densely orange-yellow or reddish tomentose (drying brown), glabrescent, (5–)6–8-val-

vate. Seeds including wing ca. 2 cm, dark to light brown when dry, seed proper small. Fl. May–Jun, fr. Sep–Oct.

Evergreen broad-leaved forests; 500–1700 m. Guangxi, Guizhou, Hainan, Sichuan, Yunnan [Vietnam].

- 1a. Branchlets, petioles, and leaf blades abaxially puberulous 1a. var. *orientalis*
1b. Branchlets, petioles, and leaf blades abaxially glabrous 1b. var. *glabrescens*

1a. *Itoa orientalis* var. *orientalis*

梔子皮(原变种) zhi zi pi (yuan bian zhong)

Carrierea vieillardii Gagnepain; *Mesaulosperma vieillardii* (Gagnepain) Slooten.

Branchlets, petioles, and leaf blades abaxially puberulous.

Flora of China 13: 127–128. 2007.

Evergreen broad-leaved forests; 500–1400 m. Guangxi, Guizhou, Hainan, Sichuan, Yunnan [Vietnam].

1b. *Itoa orientalis* var. *glabrescens* C. Y. Wu ex G. S. Fan, J. Wuhan Bot. Res. 8(2): 133. 1990.

光叶槲子皮 *guang ye zhi zi pi*

Branchlets, petioles, and leaf blades abaxially glabrous. Fl. Mar–Jun, fr. Jul–Dec.

• Evergreen broad-leaved forests in mountains; 500–1700 m. Guangxi, Guizhou, Yunnan.

Flora of China 13: 127–128. 2007.