

## 2. PICRASMA Blume, Bijdr. 247. 1825.

苦木属 *ku mu shu*

Trees with bitter bark. Branches with a pith, glabrous. Leaves odd-pinnate; base of petiole or petiolule often dilated into a pulvinus that withers when dry; stipules early deciduous or persistent; leaflets opposite or nearly so; blades entire or serrate. Inflorescences axillary, cymose panicles. Flowers unisexual or polygamous, 4- or 5-merous; subtending bracts small or early deciduous; pedicel with lower half articulated. Sepals small, free or lower half connate, persistent. Petals valvate or nearly valvate in bud, apex shortly incurved, cuspidate, longer than sepals, persistent in females. Stamens 4 or 5, inserted at base of disk. Disk slightly thickened, entire or shallowly 4- or 5-lobed, sometimes dilate in fruit. Carpels 2–5, free, degenerate or rudimentary in males, each with a single ovule; style connate basally, apex free; stigma free. Fruit comprising one or more drupelike monocarps (each a druparium); exocarp thin, fleshy, wrinkled when dry; endocarp bony. Seeds with a broad hilum, exalbuminous; testa membranous, slightly thick and hard.

About nine species: tropical and subtropical America and Asia; two species (one endemic) in China.

- 1a. Sepals 5, sometimes 4; leaflets 9–15, blades irregularly serrate; druparium blue-green when ripe, 6–8 × 5–7 mm ..... 1. *P. quassioides*
- 1b. Sepals 4; leaflets 5–9, blades entire or sometimes sinuate or wrinkled-sinuate; druparium red-brown when ripe, 10–13 × 7–9 mm ..... 2. *P. chinensis*

**1. *Picrasma quassioides*** (D. Don) Bennett, Pl. Jav. Rar. 198. 1844.

苦树 *ku shu*

Trees, deciduous, up to 10 m tall; bark purplish brown, smooth, with gray stripes. Leaves alternate, odd-pinnate, 15–30 cm; stipules lanceolate, early deciduous; leaflets 9–15; blades ovate-lanceolate or broadly ovate, base cuneate, oblique except for terminal leaflet, both surfaces glabrous except abaxially pubescent on midrib or lateral veins when young, then glabrescent, apex acuminate; leaf scar conspicuous, semirounded or rounded. Flowers dioecious, in axillary cymes; rachis densely yellow-brown puberulent. Sepals 4 or 5, small, ovate or oblong, abaxially yellow-brown puberulent, imbricate. Petals as many as sepals, ovate or broadly ovate, both surfaces with midrib puberulent. Stamens 2 × as long as petals in males, shorter than

petals in females, opposite sepals. Disk 4- or 5-lobed. Carpels 4 or 5, free. Druparium blue-green when ripe, globose, 6–8 × 5–7 mm, calyx persistent, testa thin. Fl. Apr–May, fr. Jun–Sep.

Mountainous mixed forests; 1400–3200 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, India, Japan, Kashmir, Korea, Nepal, Sri Lanka].

- 1a. Leaflet blades abaxially pubescent only on midrib or lateral veins when young; inflorescence rachis densely yellow-brown puberulent ..... 1a. var. *quassioides*
- 1b. Leaflet blades glabrous; inflorescences and infructescence glabrous or sparsely pubescent then glabrescent ..... 1b. var. *glabrescens*

### **1a. *Picrasma quassioides* var. *quassioides***

苦树(原变种) *ku shu* (*yuan bian zhong*)

*Simaba quassioides* D. Don, Prodr. Fl. Nepal. 248. 1825; *Picrasma japonica* A. Gray; *Rhus ailanthoides* Bunge.

Leaflet blades glabrous, but abaxially pubescent along midrib or lateral veins when young. Inflorescence rachis densely yellow-brown puberulent.

Mountainous mixed forests; 1400–2400 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, India, Japan, Kashmir, Korea, Nepal, Sri Lanka].

### **1b. *Picrasma quassioides* var. *glabrescens*** Pampanini, Nuovo Giorn. Bot. Ital., n.s., 18: 171. 1911.

光序苦树 *guang xu ku shu*

Leaflet blades glabrous. Inflorescences and infructescence glabrous or sparsely pubescent then glabrescent.

- Mountainous mixed forests; 1800–3200 m. Hubei, Yunnan.

2. *Picrasma chinensis* P. Y. Chen, Acta Bot. Austro Sin. 1: 71. 1983.

中国苦树 zhong guo ku shu

Trees, ?deciduous, up to 15 m tall. Branches yellow-green

when young, glabrous, purplish red, gray-white lenticellate when old. Leaves alternate, odd-pinnate; stipules early deciduous; petiole 4–7 cm, ca. 1/3 of rachis, terete, sparsely puberulent or glabrous; leaflets 5–9, opposite or nearly so; petiolule 3–9 mm; blades oblong or ovate-oblong, 7–13 × 2.5–5 cm, papery or thickly papery, glabrous, base cuneate or broadly cuneate, oblique with one side sometimes slightly rounded, margin entire or sometimes sinuate or shallowly sinuate-serrate, apex long acuminate or caudate-acuminate; midrib and lateral veins prominent, especially abaxially, lateral veins 5–8 pairs. Panicles axillary, 5–12 cm, longer in males than in females. Flowers polygamous, usually 4-merous, sometimes 5-merous, smaller in males than in bisexuals; pedicel 2.5–3 mm. Sepals 4, ovate, 0.6–1 mm, abaxially puberulent. Petals 4, yellow-green, ovate-oblong, 2–2.5 mm, apex obtuse, abaxially very sparsely puberulent or glabrous. Stamens 4, as long as petals; filaments white, long hairy. Disk 4-lobed, long white hairy. Bisexual flowers: pedicel 4–5 mm; sepals 4, broadly ovate, ca. 1.5 mm, abaxially puberulent; petals 4, ovate-oblong, 4–5 mm, apex obtuse or acute, abaxially very sparsely puberulent or glabrous; stamens 4, ca. 1/2 as long as petals, filaments white, long hairy; ovary 4-loculed; style terete, stigma 4-lobed. Druparium red-brown when ripe, globose, 10–13 × 7–9 mm; testa wrinkled when dry; petals persistent, oblong or ovate-oblong, 10–13 × 7–9 mm. Fl. Apr–May, fr. Jun–Aug.

- Sparse forests, mountain thickets; 600–1400 m. Guangxi, Xizang, Yunnan.

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