

### 3. LIQUIDAMBAR Linnaeus, Sp. Pl. 2: 999. 1753.

枫香树属 feng xiang shu shu

Trees, deciduous. Leaves alternate, long-petiolate; stipules linear, ± adnate to base of petioles, caducous, leaving small scars; leaf blade palmately 3–7(or more)-lobed, rarely entire, margin serrate, venation actinodromous. Plants monoecious. Inflorescence usually a globose head (a condensed panicle). Male inflorescence a head or spike, several to many together in racemes. Female inflorescence capitate, with 1 bract. Flowers unisexual. Sepals and petals absent. Male flowers: stamens many; filaments as long as anthers; anthers ovoid, thecae 2-sporangiate, each dehiscing by a longitudinal slit or rudimentary valve, apex rounded or emarginate. Female flowers: staminodes (also interpreted as carpelodes) forming rudimentary scales or teeth around gynoeceium, persistent in fruit; ovary semi-inferior; ovules many, inserted on septum, only lowest ones fertile; stigmas decurrent, persistent in fruit. Infructescences globose. Capsules woody, dehiscing loculicidally by 2 valves; pericarp thin; styles persistent. Seeds many, most of them sterile, minute, irregularly angular; fertile seeds large, ellipsoid, slightly compressed, membranous-winged; seed coat reticulately sculptured; endosperm thin, embryo straight.  $2n = 30, 32$

Five species: E and SW Asia, Central and North America; two species (one endemic) in China.

*Liquidambar edentata* Merrill (J. Arnold Arbor. 8: 6. 1927) and *L. rosthornii* Diels (Bot. Jahrb. Syst. 29: 380. 1900) were described from China (the former from Fujian), but the present authors have no specimens.

The resin, stems, leaves, and fruit are used medicinally.

- 1a. Pistillate flowers and capsules with calyx teeth clearly defined, acute; infructescences with 24–43 capsules; petiole 8–12 cm ..... 1. *L. formosana*
- 1b. Pistillate flowers and capsules with calyx teeth very short and scalelike or absent; infructescences with 15–26 capsules; petiole 4–8 cm ..... 2. *L. acalycina*

**1. *Liquidambar formosana*** Hance, Ann. Sci. Nat. Bot., sér. 5, 5: 215. 1886.

枫香树 feng xiang shu

*Liquidambar acerifolia* Maximowicz; *L. formosana* var. *monticola* Rehder & E. H. Wilson; *L. maximowiczii* Miquel; *L. tonkinensis* A. Chevalier.

Trees to 30 m tall, trunk sometimes 1 m in diam.; bark gray-brown; branchlets pubescent or glabrous, somewhat lenticellate; buds ovoid, 1 cm, puberulent. Stipules red, nearly free or adnate to petiole, 1–1.4 cm; petiole 8–12 cm, pubescent; leaf blade broadly ovate, palmately 3-lobed and 3-veined, central lobe longer, abaxially usually drying gray-white, pubescent or glabrous, base rounded, margin glandular serrate, apex caudate-acuminate, cordate, subcordate or truncate, veins prominent on both surfaces. Male inflorescence a short spike, several arranged in a raceme. Female inflorescence 24–43-flowered; peduncle 3–6 cm, occasionally lenticellate, eglandular. Male flowers: stamens many, filaments unequal, anthers slightly shorter than filaments. Female flowers: staminode teeth 4–7, needlelike, 4–8 mm; ovary pubescent, styles 6–10 mm, usually coiled backwards. Infructescence globose, 3–4 cm wide. Capsules with persistent staminodes. Seeds many, brown. Fl. Mar–Jun, fr. Jul–Sep.

Sunny places, near villages, montane forests; 500–800 m. Anhui,

Fujian, Guangdong, Guizhou, Hainan, Hubei, Jiangsu, Jiangxi, Sichuan, Taiwan, Zhejiang [S Korea, Laos, N Vietnam].

**2. *Liquidambar acalycina*** H. T. Chang, Acta Sci. Nat. Univ. Sunyatsen. 1959(2): 33. 1959.

缺萼枫香树 que e feng xiang shu

Trees ca. 25 m tall; bark black-brown; branchlets glabrous, lenticellate. Stipules 3–10 mm, brown-tomentose; petiole 4–8 cm; leaf blade broadly ovate, 8–13 × 8–15 cm, both surfaces glabrous or pubescent in young leaves, palmately 3–5-veined, veins prominent abaxially, lateral lobes triangular-ovate. Male inflorescence globose, several, arranged in racemes, 2–2.5 cm wide, drying black-brown in fruit; peduncle 2–3 cm. Female inflorescence solitary in leaf axils of short shoots, 15–26-flowered; peduncle 3–6 cm, sparsely pubescent. Male flowers: filaments 1–1.5 mm; anthers ovoid. Female flowers: staminode teeth absent or scalelike and sometimes very short; styles 5–7 mm, brown-pubescent. Capsules without persistent staminode teeth, persistent styles recurved. Fertile seeds winged, sterile seeds many, brown, irregularly angular. Fl. Mar–Jun, fr. Jul–Sep.

• Montane evergreen forests; 600–1000 m. Anhui, Guangdong, Guangxi, Guizhou, Hubei, Jiangsu, Jiangxi, Sichuan.

The wood is used for making furniture.

HAMAMELIDACEAE