

### 3. MANGIFERA Linnaeus, Sp. Pl. 1: 200. 1753.

杧果属 mang guo shu

Evergreen trees, andro-monoecious with functionally staminate and bisexual flowers in same inflorescence. Leaves petiolate, simple; leaf blade margin entire. Inflorescence a terminal pleiothyrsoid. Flowers small, 4- or 5-merous, with imbricate aestivation. Sepals sometimes united at base. Petals with 1–5 prominent veins adaxially. Stamens 5, free or united with disk basally, usually 1 (or 2) noticeably larger. Disk of 5 separate extrastaminal glands. Ovary glabrous, 1-locular, 1-ovulate; style 1, terminal. Fruit drupaceous; mesocarp fleshy or fibrous; endocarp thick and bony, compressed. Embryo 1 to several by polyembryony.

About 69 species: tropical Asia; five species (one endemic, one introduced) in China.

- 1a. Inflorescence minutely pubescent.
  - 2a. Inflorescence 20–35 cm; staminodes 3 or 4; drupe 5–10 cm, mesocarp fleshy, endocarp flattened ..... 1. *M. indica*
  - 2b. Inflorescence ca. 14 cm; staminodes absent; drupe 3.5–5 cm, mesocarp thin, endocarp rounded or slightly flattened ..... 2. *M. siamensis*
- 1b. Inflorescence glabrous.
  - 3a. Leaf blade 2–3 cm wide; fruit rounded; seed oblique ..... 3. *M. persiciforma*
  - 3b. Leaf blade 3–6 cm wide; fruit elongate; seed not oblique.
    - 4a. Pedicel and sepals often sparsely pubescent; drupe not beaked ..... 4. *M. laurina*
    - 4b. Pedicel and sepals glabrous; drupe beaked ..... 5. *M. sylvatica*

#### 1. *Mangifera indica* Linnaeus, Sp. Pl. 1: 200. 1753.

杧果 mang guo

*Mangifera austroyunnanensis* Hu.

Trees, 10–20 m tall; branchlets brown, glabrous. Petiole 2–6 cm, grooved apically, inflated basally; leaf blade oblong to oblong-lanceolate, 12–30 × 3.5–6.5 cm, leathery, deep green adaxially, light green abaxially, glabrous on both sides, base cuneate to obtuse, margin entire, undulate, apex acute to long acuminate, lateral veins 20–25 pairs, midrib prominent on both sides, reticulate venation obscure. Inflorescence paniculate, terminal, 20–35 cm, glabrous to tomentose-pilose; bracts ca. 1.5 mm, lanceolate pubescent. Pedicels 1.5–3 mm, articulate. Sepals ovate-lanceolate, 2.5–3 × ca. 1.5 mm, glabrous to pubescent, acuminate. Petals light yellow with prominent red tree-shaped pattern adaxially, oblong or oblong-lanceolate, 3.5–4 × ca. 1.5 mm, glabrous, recurved at anthesis. Fertile stamen 1, ca. 2.5 mm, with ovate anther; staminodes 4, 0.7–1 mm. Disk inflated, fleshy, 5-lobed. Ovary oblique, ovate, ca. 1.5 mm in diam. at anthesis; style ca. 2.5 mm, eccentric. Drupe oblong to subreniform, greenish yellow to red, 5–10 × 3–4.5 cm; fleshy mesocarp bright yellow; endocarp ± compressed. Fl. Mar–Apr, fr. May–Jul.

Cultivated; 200–1400 m. S Fujian, Guangdong, Guangxi, Taiwan, S Yunnan [native to continental SE Asia; cultivated in tropical regions worldwide].

This species is a popular tropical fruit tree with more than a hundred cultivars.

#### 2. *Mangifera siamensis* Warburg ex Craib, Bot. Tidskr. 32: 330. 1915.

泰国杧果 tai guo mang guo

Trees; branchlets pubescent. Petiole 1–4 cm, flattened apically, inflated basally; leaf blade oblong to lanceolate, 10–19

× 2.5–5 cm, leathery, deep green adaxially, light green abaxially, glabrous, base cuneate or broadly cuneate, margin entire, undulate, apex acute to shortly acuminate, lateral veins 18–22 pairs, midrib prominent on both sides. Inflorescence paniculate, terminal, up to 14 cm, shortly pedunculate, minutely pubescent; floral subtending bracts ca. 1.5 mm, acute. Sepals 5, ca. 2 × 1.5 mm, sparsely tomentose-pilose. Petals oblong or oblong-lanceolate, ca. 2.7 × 1.5 mm, with 3 prominent veins adaxially. Fertile stamen 1, with ca. 11 mm filament and ca. 0.7 mm ovate anther; staminodes absent. Disk 5-lobed. Ovary ca. 0.7 mm; style ca. 1.5 mm. Drupe elliptic-reniform, 3.5–5 × ca. 2.5 cm; mesocarp thin; endocarp reniform, slightly compressed, 2.8–3.5 × 1.8–2 cm. Fl. Mar–Apr, fr. May–Jul.

Lowland forests; 600–700 m. S Yunnan (Jinghong) [Thailand].

#### 3. *Mangifera persiciforma* C. Y. Wu & T. L. Ming, Fl. Yunnan. 2: 368. 1979.

扁桃 bian tao

*Mangifera hiemalis* J. Y. Liang.

Trees, 10–19 m tall; branchlets grayish brown, glabrous. Petiole 1.5–3.5 cm, grooved apically, inflated basally; leaf blade narrowly ovate to lanceolate, 11–20 × 2–2.8 cm, leathery, glabrous, deep green adaxially, light green abaxially, base cuneate, margin entire, undulate, apex acute or shortly acuminate, lateral veins ca. 20 pairs, midrib elevated on both sides, reticulate venation pattern prominent on both sides. Inflorescence paniculate, terminal, branched basally, 10–19 cm, glabrous; floral subtending bracts triangular, ca. 1.5 mm. Pedicels ca. 2 mm, articulated. Sepals ovate, ca. 2 × 1.5 mm, glabrous, concave. Petals yellowish green, with 4 or 5 brown prominent veins adaxially, oblong-lanceolate, ca. 4 × 1.5 mm. Fertile stamen 1, 2.5–3 mm; staminodes (1 or)2 or 3; anthers absent. Disk 4- or 5-lobed. Ovary globose, ca. 1.2 mm in diam. at anthesis; style subterminal, shorter than fertile stamen. Drupe rounded to slightly compressed, 4–5 cm in diam.; mesocarp

thin; endocarp oblique, ovate or rhomboid-ovate, compressed, ca.  $4 \times 2.5$  cm. Fl. Apr, fr. May–Jun.

• Lowland forests; 200–600 m. S Guangxi, S Guizhou, SE Yunnan.

**4. *Mangifera laurina*** Blume, Mus. Bot. 1: 195. 1850.

长梗杧果 chang geng mang guo

*Mangifera longipes* Griffith.

Trees, up to 25 m tall; branchlets purplish brown, glabrous. Petiole slender, 2.5–5.5 cm, grooved apically, inflated basally; leaf blade oblong-lanceolate to elliptic-lanceolate,  $15\text{--}26 \times 4\text{--}6$  cm, leathery, glabrous, base cuneate to broadly cuneate, margin entire, undulate, apex acuminate or caudate-acuminate, lateral veins more than 25 pairs, prominent on both sides. Inflorescence paniculate, terminal, ca. 30 cm, with slender primary branches. Pedicels ca. 1.5 mm, sparsely pubescent to glabrous. Sepals ovate, 2–2.5 mm, sparsely pubescent, acute. Petals with 3 or 4 prominent veins adaxially, linear-oblong, ca.  $4.5 \times 1.5$  mm. Fertile stamen 1, longer than petals; staminodes 2, very short,

with knoblike sterile anthers. Disk 5-lobed. Ovary globose; style subterminal,  $3 \times$  ovary in length. Drupe oblong to subreniform, yellowish green at maturity,  $5\text{--}6 \times$  ca. 4 cm; mesocarp thin; endocarp large, subglobose. Fl. Mar, fr. Apr–May.

Lowland forests; ca. 300 m. S Yunnan [Cambodia, Indonesia, Malaysia (peninsular), Philippines, Singapore].

**5. *Mangifera sylvatica*** Roxburgh, Fl. Ind. 2: 438. 1824.

林生杧果 lin sheng mang guo

Trees, 6–20 m tall; branchlets dark brown, glabrous. Petiole 3–7 cm, inflated basally; leaf blade lanceolate to oblong-lanceolate,  $15\text{--}24 \times 3\text{--}5.5$  cm, papery or thinly leathery, glabrous on both sides, base cuneate, margin entire, apex acuminate, lateral veins 16–20 pairs, prominent on both sides. Inflorescence paniculate, terminal, 15–33 cm, glabrous, with slender primary branches; floral subtending bracts ovate-lanceolate, ca. 1 mm. Pedicels slender, 3–8 mm, glabrous, articulate. Sepals ovate to lanceolate, ca.  $3.5 \times 1.5$  mm, concave, glabrous. Petals white with 3–5 dark brown veins adaxially, lanceolate to linear-lanceolate, ca.  $7 \times 1.5$  mm, recurved and twisted apically at anthesis. Fertile stamen 1, ca. 4 mm; staminodes 1 or 2, shortly subulate to dentate; anther ovoid, ca. 0.7 mm. Ovary globose, ca. 1.5 mm in diam.; style subterminal. Drupe oblique, ovate,  $6\text{--}8 \times 4\text{--}5$  cm, apex elongated into a curved beak; mesocarp thin; endocarp large, rounded to elliptic. Fl. Apr–May, fr. Jun–Aug.

Lowland and hill forests; 600–1900 m. S Yunnan [Bangladesh, Bhutan, Cambodia, India (Assam, Darjeeling, Sikkim), Myanmar, Thailand].

Fl. China 11: 338–339. 2008.