

## 1. **PROTIUM** N. L. Burman, Fl. Indica, 88. 1768, nom. cons.

马蹄果属 ma ti guo shu

Small trees. Branchlet pith without vascular strands. Leaves odd-pinnate, alternate, exstipulate; leaflets with petiolule, apex cuspidate. Flowers in axillary or terminal panicles, unisexual, bisexual, or polygamous. Calyx cupular or campanulate, shallowly 4- or 5-lobed, lobes imbricate in bud, recurved, persistent but not enlarged in fruit. Petals 5, valvate, apex incurved in bud, later recurved. Stamens as many as or  $2 \times$  as many as petals or more, distinct, inserted outside of disk, reduced in females but probably fertile; disk fleshy and thick, glabrous, flattened in male flowers, annular or cupular in female or bisexual flowers, grooved; filaments glabrous. Ovary 4- or 5-celled, glabrous or pubescent, globose or ovoid, reduced in male flowers; ovules 2 in each cell; style short or long; stigma capitate or shallowly 4- or 5-lobed. Drupe globose, ovoid, or somewhat compressed, apex with rudiment of style; pyrenes 4 or 5 (some often degenerated), rarely 1 or 2, bony with thin coat; cotyledons folded, palmate.

About 90 species: mostly in tropical America, the rest scattered in all parts of tropical Asia; two species (one endemic) in China.

- 1a. Rachis, leaflets, and inflorescences densely yellow pubescent; drupe ca. 1 cm in diam. .... 1. *P. serratum*  
1b. Rachis, leaflets, and inflorescences sparsely shortly pubescent; drupe 1.5–2 cm in diam. .... 2. *P. yunnanense*

**1. *Protium serratum*** (Wallich ex Colebrooke) Engler, Monogr. Phan. 4: 88. 1883.

马蹄果 ma ti guo

*Bursera serrata* Wallich ex Colebrooke, Trans. Linn. Soc. London 15: 361. 1827.

Trees deciduous. Branchlets densely yellow pubescent, gray pubescent when old. Leaflets 5–9; petiolules 5–13 mm; blades oblong or ovate-oblong, 7–10 × 2.5–4.5 cm, papery or rigidly papery, base rounded or broadly cuneate, margin serrulate or sometimes entire, apex acute or caudate-acuminate; lateral veins prominent on both surfaces, ± densely pubescent. Panicles axillary, 6–14 cm, densely pubescent. Flowers light green; pedicel ca. 2 mm. Sepals less than 1 mm. Petals oblong-lanceolate, 1.5–2 mm. Drupe nearly ovoid to globose, ca. 1 cm in diam., persistent style oblique, glabrous; pyrenes 2 or 3. Fl. Apr–May, fr. Jun.

Montane sparse or dense woods; 600–1000 m. SW and W Yunnan (Longling, Luxi, Mengding) [Bhutan, Cambodia, India, Laos, Myanmar, Thailand, Vietnam].

**2. *Protium yunnanense*** (Hu) Kalkman, Blumea 7: 546. 1954.

滇马蹄果 dian ma ti guo

*Santiria yunnanensis* Hu, Bull. Fan Mem. Inst. Biol., Bot. 10: 159. 1940.

Trees deciduous, up to 15 m tall, up to 60 cm d.b.h. Branchlets longitudinally striped, lenticellate, sparsely pubescent. Leaves ca. 20 cm; leaflets 5–9; petiolules 5–10 mm; rachis and petiolules striped, shortly pubescent or nearly glabrous; blades oblong-ovate or oblong-rounded, 6–13 × 4–5 cm, rigidly papery, base rounded or broadly cuneate, oblique, margin sparsely serrate near apex, apex acute or caudate; lateral veins 9–11 pairs, sparsely shortly pubescent, midrib and lateral veins

prominent on both surfaces, especially abaxially. Flowers unseen. Infructescence paniculate, axillary, ca. 8 cm; rachis and peduncle sparsely shortly pubescent, peduncle ca. 1 cm. Drupe subglobose, 1.5–2 cm in diam., dark purple; exocarp shallowly wrinkled. Fr. Nov.

- Secondary forests; 500–600 m. S Yunnan (Mengla).

