

20. HETEROPANAX Seemann, Fl. Vit. 114. 1866.

幌伞枫属 huang san feng shu

Shrubs or trees, evergreen, andromonoecious, unarmed, stellate pubescent. Leaves 2–5-pinnately compound, margins entire; stipules inconspicuous. Inflorescence a terminal panicle of umbels, peduncles with a terminal umbel of bisexual flowers and usually 1 to several lateral umbels of male flowers; bracts and bracteoles persistent. Pedicels not articulate below ovary. Calyx rim minutely dentate. Petals 5, valvate. Stamens 5. Ovary 2-carpellate; styles 2, free or united to middle. Fruit a drupe, laterally compressed. Seed compressed, endosperm ruminant.

About eight species: S and SE Asia; six species (two endemic) in China.

- 1a. Fruit subglobose to weakly compressed laterally, 2–4 mm thick at maturity; leaves 3–5-pinnately compound.
- 2a. Styles connate to above middle, free arms divergent in fruit; leaflets narrowly elliptic, apex long acuminate to caudate 1. *H. hainanensis*
- 2b. Styles divided to base, free arms strongly recurved in fruit; leaflets elliptic (rarely narrowly elliptic), apex acute to shortly acuminate 2. *H. fragrans*
- 1b. Fruit strongly compressed laterally, 1–1.5 mm thick at maturity; leaves 2–5-pinnately compound.
- 3a. Pedicels 1.5–3.5(–4) mm in fruit.
- 4a. Leaves 2-pinnately compound, leaflets orbicular to ovate, base rounded 3. *H. yunnanensis*
- 4b. Leaves 3–5-pinnately compound, leaflets elliptic to narrowly elliptic, base narrowly acute to acuminate 4. *H. brevipedicellatus*
- 3b. Pedicels 4–10 mm in fruit.
- 5a. Leaves 2-pinnately compound, leaflets leathery, 8–11 × 3–6 cm 5. *H. nitentifolius*
- 5b. Leaves 3–5-pinnately compound, leaflets papery, 2–6 × 0.8–2 cm 6. *H. chinensis*

1. *Heteropanax hainanensis* C. B. Shang, *Adansonia*, sér. 3, 19: 80. 1997.

海南幌伞枫 hai nan huang san feng

Trees, to ca. 7 m tall. Leaves 3- or 4-pinnately compound; petiole and rachis glabrous; petiolules 4–10 mm; leaflets narrowly elliptic, 4.5–11 × 1.2–4.2 cm, papery, both surfaces glabrous, lateral veins 5 or 6 pairs, slightly distinct, base narrowly cuneate, margin entire, minutely revolute, apex acuminate to slightly caudate. Inflorescence brown-red stellate pubescent; primary axis more than 35 cm; secondary axes to 20 cm; peduncles 1.5–2.5 cm; umbels in fruit 2–3 cm in diam., terminal ones often larger; pedicels 5–10 mm. Fruit brown-red at maturity when dry, weakly compressed laterally, circular to oblate, 4–6 × 5–8 mm; styles 2, persistent, 2–3 mm, united below middle, free arms recurved. Fr. Dec.

• Forest margins, near villages; below 800 m. Hainan (Chengmai).

2. *Heteropanax fragrans* (Roxburgh ex Candolle) Seemann, Fl. Vit. 114. 1866.

幌伞枫 huang san feng

Panax fragrans Roxburgh ex Candolle, Prodr. 4: 254. 1830; *Heteropanax fragrans* var. *attenuatus* C. B. Clarke; *H. fragrans* var. *ferrugineus* Y. F. Deng; *H. fragrans* var. *subcordatus* C. B. Clarke.

Trees, to 30 m tall. Leaves 3–5-pinnately compound, 50–100 cm; petiole 15–45 cm, glabrous; leaflets opposite, sessile or with petiolules to ca. 1 cm, elliptic to elliptic-ovate, (3–)5.5–13 × (1.5–)3.5–6 cm, papery, both surfaces glabrous, lateral veins 6–10 pairs, distinct on both surfaces, base cuneate

to rounded, margin entire, minutely revolute, apex shortly acuminate. Inflorescence densely ferruginous stellate tomentose, glabrescent; primary axis to 30 cm or more; secondary axes to 40 cm; peduncles to 9 cm; umbels of bisexual flowers 2–2.5 cm in diam., umbels of male flowers 1–1.5 cm in diam.; pedicels 4–8 mm, elongating in fruit. Fruit ovoid-globose to oblate or slightly didymous, weakly compressed laterally, 5–7 × 3–5 mm at maturity, 2–3 mm thick; styles persistent, ca. 2 mm; pedicels ca. 8 mm. Fl. Oct–Dec, fr. Feb–Apr.

Hills, forests in valleys, or cultivated in gardens, near sea level to 1000 m. S Fujian, Guangdong, Guangxi, Hainan, SE Yunnan [Bhutan, India, Indonesia, Myanmar, Nepal, Thailand, Vietnam].

This species is used medicinally and for timber.

3. *Heteropanax yunnanensis* G. Hoo, *Acta Phytotax. Sin.*, Addit. 1: 167. 1965.

云南幌伞枫 yun nan huang san feng

Trees, evergreen, to ca. 10 m tall. Leaves 2-pinnately compound; petiole 6–22 cm, glabrous; petiolules 2–12 mm, terminal one to 2.2 cm; leaflets orbicular to ovate or elliptic; 4.5–6 × 2.5–4.5 cm, papery, both surfaces glabrous, lateral veins 4 or 5 pairs, slightly conspicuous on both surfaces, base rounded to broadly cuneate, margin entire, apex abruptly acute or shortly abruptly acuminate. Inflorescence densely ferruginous pubescent, glabrescent; primary axis ca. 15 cm; secondary axes 25–30 cm; peduncles 1.8–3.2 cm. Fruit compressed laterally, circular to slightly oblate, 6–8 mm in diam., ca. 1.5 mm thick; styles recurved, free to base, ca. 2 mm; pedicels 2–3 mm. Fl. Nov, fr. Apr–May.

• Forests in valleys; 100–1500 m. SW Yunnan (Jinggu, Lancang).

This species is used medicinally.

4. *Heteropanax brevipedicellatus* H. L. Li, *Sargentia* 2: 94. 1942.

短梗幌伞枫 duan geng huang san feng

Trees, to 7 m tall. Leaves 4- or 5-pinnately compound; petiole 10–45 cm, stout; leaflets subsessile or with petiolule to 1 cm (often somewhat winged), dark green or more commonly gray-green adaxially when dry, lighter or more brown abaxially, elliptic or narrowly elliptic, occasionally slightly ovate, (2–)4–8.5 × 0.8–3.5 cm, papery, both surfaces glabrous, lateral veins 5 or 6 pairs, nearly obscure, base attenuate, margin entire, rarely sparsely and irregularly serrulate, minutely revolute, apex acuminate. Inflorescence densely dark ferruginous throughout, indumentum persistent; primary axis 30–70 cm; secondary axes 20–30 cm; peduncles 1–2 cm; umbels (0.5–)1–1.5 cm in diam.; pedicels 1.5–4 mm. Fruit strongly compressed laterally, circular to slightly oblate, 5–6 × 7–8 mm, ca. 1 mm thick; pedicels (3.5–)4 mm, ferruginous pubescent. Fl. Oct–Dec, fr. Nov, Jan–Feb.

Forests, forest margins, roadsides, often in shaded places; below 600 m. C Fujian, Guangdong, Guangxi, S and E Jiangxi [N Vietnam].

This species is used medicinally and as an ornamental.

5. *Heteropanax nitentifolius* G. Hoo, *Acta Phytotax. Sin.*, *Addit.* 1: 166. 1965.

亮叶幌伞枫 liang ye huang san feng

Trees, evergreen, to 10 m tall. Leaves 2-pinnately compound; petiole ca. 10 cm, glabrous; petiolules 0.3–2 cm; leaflets shiny adaxially, oblong or elliptic, 8–12 × 3–6 cm, leathery, both surfaces glabrous, secondary veins ca. 8 pairs, prominent abaxially, slightly impressed adaxially, base broadly cuneate, attenuate, margin entire, apex shortly acuminate. Inflorescence densely ferruginous tomentose; primary axis to ca. 170 cm; secondary axes to ca. 20 cm; peduncles 1–2 cm; pedicels 5–11 mm. Fruit strongly compressed laterally, broadly ovate to oblate, 5–6 × 7–8 mm, ca. 1 mm thick; styles 3–4 mm. Fl. Sep–Nov, fr. Nov–Dec.

Forest margins, roadsides; 100–800 m. SE Yunnan (Hekou) [N Vietnam].

This species is used medicinally.

6. *Heteropanax chinensis* (Dunn) H. L. Li, *Sargentia* 2: 95. 1942.

华幌伞枫 hua huang san feng

Heteropanax fragrans (Roxburgh ex Candolle) Seemann var. *chinensis* Dunn, *J. Linn. Soc., Bot.* 38: 360. 1908.

Shrubs, to 3 m tall. Leaves 3–5-pinnately compound, 50–60 cm; petiole 15–35(–45) cm; leaflets shiny dark green to khaki green adaxially, sometimes slightly glaucous abaxially, narrowly elliptic, 2.5–6(–7.5) × 0.8–2(–3) cm, both surfaces glabrous, lateral veins ca. 6 pairs, obscure, base narrowly cuneate, margin entire, occasionally revolute, apex acuminate to caudate. Inflorescence densely ferruginous tomentose; primary axis to 70 cm; secondary axes to 20 cm; peduncles 1–3 cm; umbels ca. 2.5 cm in diam.; pedicels in flower ca. 4 mm, densely ferruginous tomentose. Fruit strongly compressed laterally, 8–9 mm in diam., less than 2 mm thick; styles recurved, 2–3 mm; pedicels 6–8 mm. Fl. Oct–Nov, fr. Jan–Feb.

Forests or scrub on mountain slopes; below 800 m. Guangxi (Nanning, Shangsi), S Yunnan (Simao) [N Vietnam].

This species is used medicinally.

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