

17. MACROPANAX Miquel, Bonplandia (Hannover) 4: 139. 1856.

大参属 da shen shu

Trees or shrubs, evergreen, hermaphroditic (?or functionally andromonoecious), unarmed. Leaves simple, palmately lobed, or palmately compound and leaflets 3–7, margin entire or serrate; stipules absent or connate into a short lamina within petiole or absent. Inflorescence a terminal panicle of umbels; secondary axes with a terminal umbel of bisexual flowers, sometimes also with lateral umbels of smaller, later flowering (?functionally male) flowers; bracts small, caducous. Pedicels articulate below ovary, often minutely bracteolate. Calyx entire or 5-toothed. Petals 5, valvate. Stamens 5. Ovary 2(or 3)-carpellate; styles united into a column or partially free apically. Fruit a drupe, subglobose or ovoid, sometimes laterally compressed (especially when dry). Seeds semiterete or laterally compressed; endosperm uniform, ruminant or rugose.

About 20 species: S and SE Asia; seven species (five endemic) in China.

- 1a. Styles united to ca. 3/4 their length, branches free apically 1. *M. rosthornii*
 1b. Styles united throughout, forming an unbranched column, stigmas sessile.
 2a. Inflorescence glabrous throughout (occasionally pubescent in *M. undulatus* when young, but then leaflets with entire margins).
 3a. Mature fruit 8–9 mm in diam.; calyx teeth and stamens 7–10 6. *M. decandrus*
 3b. Mature fruit 5–6 mm in diam.; calyx teeth and stamens 5(or 6) 7. *M. undulatus*
 2b. Inflorescence densely shortly pubescent throughout.
 4a. Stems and calyx pubescent; leaflets with 4–6 pairs of secondary veins 5. *M. paucineris*
 4b. Stems and calyx glabrous; leaflets with 6–10 pairs of secondary veins.
 5a. Terminal leaflet elliptic, ca. 2 × as long as wide, base rounded to broadly cuneate; petiole 3–7 cm 2. *M. chienii*
 5b. Terminal leaflet narrowly elliptic or oblong to slightly obovate, 2.4–4 × as long as wide, base narrowly acute to cuneate; petiole (8–)10–17 cm.
 6a. Leaflets (3–)5(–7); fruit ellipsoid to oblong, height greater than diam. 3. *M. dispermus*
 6b. Leaflets 3 or 4; fruit broadly ovoid, height not greater than diam. 4. *M. serratifolius*

1. *Macropanax rosthornii* (Harms) C. Y. Wu ex G. Hoo, Acta Phytotax. Sin., Addit. 1: 166. 1965.

短梗大参 duan geng da shen

Nothopanax rosthornii Harms, Bot. Jahrb. Syst. 29: 487. 1900; *Acanthopanax rosthornii* (Harms) R. Viguier; *Heptapleurum esquirolii* H. Léveillé; *N. emeiensis* Z. Y. Zhu.

Trees, to ca. 8 m tall. Petiole 4–20 cm, slender; petiolules 3–12 mm or leaflets sessile; leaflets 3–7, oblanceolate to narrowly obovate, 5–15(–17) × 1–3(–4.5) cm, papery, secondary veins 8–10 pairs, distinct on both surfaces, base narrowly acute to attenuate, margin serrulate, minutely thickened, apex shortly acuminate to caudate, acumen usually curved. Inflorescence paniculate, glabrous throughout; primary axis 8–20 cm; peduncles 1–3 cm; pedicels 3–8 mm. Calyx rim inconspicuous. Fruit ovoid to globose, 4–5 mm in diam.; styles persistent, 1.5–2 mm, divided apically.

• Shaded places in forests, scrub, roadsides; below 1500 m. Fujian, S Gansu, N Guangdong, N Guangxi, S Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan.

This species is used medicinally.

2. *Macropanax chienii* G. Hoo, Acta Phytotax. Sin., Addit. 1: 165. 1965.

显脉大参 xian mai da shen

Trees, to ca. 5 m tall, probably andromonoecious. Petiole 3–7 cm; petiolules 0.3–3 cm; leaflets 3 or 4, oblong-elliptic or oblong, 7–16.5 × 4–9 cm, papery, both surfaces glabrous, sec-

ondary veins 6–8 pairs, tertiary veins distinct, raised on both surfaces, base rounded, margin sparsely crenulate, apex shortly acuminate. Inflorescence paniculate, densely brown pubescent; primary axis ca. 20 cm, secondary axes to 6 cm, with a terminal umbel and usually 3 lateral umbels; pedicels 4–9 mm. Calyx 5-toothed, glabrous. Fruit unknown. Fl. Nov.

• Scrub on mountain slopes; 800–900 m. S Yunnan.

3. *Macropanax dispermus* (Blume) Kuntze, Revis. Gen. Pl. 1: 271. 1891.

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Aralia disperma Blume, Bijdr. 872. 1826; *Brassaiopsis floribunda* (Miquel) Seemann; *Hedera disperma* (Blume) Candolle; *H. serrata* Wallich; *Macropanax dispermus* (Blume) Kuntze var. *integer* C. B. Shang; *M. floribundus* Miquel; *M. oreophilus* Miquel.

Trees, to ca. 12 m tall. Petiole 7–20 cm; petiolules 0.5–5 cm; leaflets (3–)5(–7), elliptic or oblong-lanceolate, 7–20 × 2–8 cm, papery or subleathery, both surfaces glabrous, secondary veins 6–10 pairs, distinct, tertiary veins more distinct adaxially, base broadly cuneate or rounded, margin glandular serrulate, apex shortly acuminate. Inflorescence paniculate, densely shortly ferruginous stellate pubescent; primary axis 20–55 cm; pedicels 3–8 mm, to 1 cm in fruit. Calyx inconspicuous, glabrous, 5-toothed. Fruit ellipsoid to oblong, ca. 5 × 4 mm, slightly ribbed when dry; styles persistent, 2–3 mm. Fl. Aug–Sep, fr. Jan–Feb.

Mixed forests in valleys, scrub on mountain slopes; 300–2300 m.

Yunnan [Bhutan, India, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

4. *Macropanax serratifolius* K. M. Feng & Y. R. Li, Fl. Yunnan. 2: 473. 1979.

粗齿大参 cu chi da shen

Trees, 10–12 m tall, probably andromonoecious. Petiole 10–20 cm; petiolules 1–4.5 cm; leaflets 3 or 4, narrowly elliptic to slightly ovate or obovate, 9–20 × 3–7 cm, subleathery, both surfaces glabrous, secondary veins 7–10 pairs, tertiary veins distinct, raised on both surfaces, base acute to cuneate, margin sparsely to moderately serrate, apex acuminate. Inflorescence paniculate, densely shortly white pubescent; primary axis 23–30 cm; secondary axes to 14 cm, with a terminal umbel of bisexual flowers and a pair of closely spaced lateral scars (presumably of umbels with male flowers); pedicels 1–1.3 cm in fruit. Calyx inconspicuous, minutely 5-toothed. Fruit broadly ovoid to subglobose, 4–6 mm in diam.; styles persistent, undivided. Fr. Nov, Apr.

• Mixed forests in valleys or scrub on mountain slopes; 300–2300 m. Guangxi, Yunnan.

5. *Macropanax paucinervis* C. B. Shang, Acta Phytotax. Sin. 18: 93. 1980.

疏脉大参 shu mai da shen

Trees, to ca. 15 m tall. Petiole ca. 16 cm; petiolules 0.3–3.5 cm; leaflets 4–6, oblong or obovate-oblong, 6–14 × 3–7 cm, papery, glabrous, minutely scaly abaxially, secondary veins 4–6 pairs, base rounded or broadly cuneate, margin sparsely serrulate toward apical 2/3 or subentire, apex acute. Inflorescence paniculate, shortly gray-brown pubescent throughout, glabrescent; primary axis ca. 30 cm, secondary axes ca. 20 cm; pedicels 0.4–1.5 cm, to 0.8–2 cm in fruit. Calyx pubescent, teeth inconspicuous. Fruit globose, ca. 8 mm in diam.; style persistent, divided apically. Fl. May–Jun, fr. Nov–Dec.

• Forests in valleys; 500–800 m. SW Guangxi (Longzhou).

6. *Macropanax decandrus* G. Hoo, Acta Phytotax. Sin., Addit. 1: 164. 1965.

十蕊大参 shi rui da shen

Trees, to 7 m tall. Trunk 18–30 cm d.b.h. Petiole 2.5–14 cm; petiolules 1–5 cm; leaflets 3–5, oblong-elliptic or oblong, 7.5–18 × 3–9 cm, papery, glabrous, secondary veins 4–6 pairs, base cuneate or broadly cuneate, margin entire, minutely thickened, revolute, apex abruptly shortly acuminate. Inflorescence paniculate, glabrous throughout; primary axis 5–12 cm, secondary axes 2–5.5 cm; pedicels 4–5 mm at anthesis, to 1.8 cm in fruit. Calyx glabrous, 7–10-toothed, sometimes obscurely so. Stamens 7–10. Fruit ovoid-globose, 1.1–1.3 cm × 8–9 mm; styles persistent, ca. 2 mm, undivided. Fl. Feb, fr. Apr–Jun.

• Dense forests in valleys, forest margins on mountain slopes; 700–1200 m. Hainan.

7. *Macropanax undulatus* (Wallich ex G. Don) Seemann, J. Bot. 2: 294. 1864 [*“undulatum”*].

波缘大参 bo yuan da shen

Hedera undulata Wallich ex G. Don, Gen. Hist. 3: 394. 1834; *Macropanax parviflorus* G. Hoo; *M. undulatus* var. *simplex* H. L. Li.

Trees, to ca. 15 m tall. Petiole 4–15 cm, glabrous; petiolules 0.5–1.5 cm; leaflets 3–5, elliptic to slightly obovate, 5–16 × 2–6 cm, subleathery, glabrous, secondary veins 4–7 pairs, base broadly cuneate or rounded, margin entire, minutely thickened, sometimes denticulate apically, apex shortly acuminate. Inflorescence paniculate, glabrous throughout; primary axis 15–

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30 cm, secondary axes 4–15(–25) cm; peduncle 0.5–2 cm; pedicels 3–5 mm, to 8 mm in fruit. Calyx inconspicuous, 5-toothed. Fruit ovoid to ellipsoid, 5–8 × 4–6 mm, ribbed when dry.

Mixed forests; 400–2200 m. Guangxi, Guizhou, Yunnan [Bhutan, India, Kashmir, Myanmar, Nepal, Thailand, Vietnam].

Two varieties (*Macropanax undulatus* var. *undulatus* and var. *simplex*) have sometimes been distinguished on the basis of minor differences in inflorescence structure, but they do not appear to be worthy of recognition.

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