

15. WALLICHIA Roxburgh, Pl. Coromandel 3: 91. 1820.

瓦理棕属 wa li zong shu

Asraoa J. Joseph; *Harina* Buchanan-Hamilton; *Wrightea* Roxburgh.

Stems clustered or rarely solitary, covered with persistent, fibrous leaf sheaths. Leaves spirally or distichously arranged; sheaths with prominent, fibrous ocreas; petioles rounded in cross section, brown tomentose; rachis tomentose as petiole; pinnae induplicate, narrowed at base, lanceolate, broadly lanceolate, or oblong, deeply to shallowly lobed, with smooth to serrate, undulate margins, blunt at apex, several apical pinnae joined into compound, broad terminal pinna, silvery gray with small, brown dots abaxially, with broad lines of brown tomentum parallel with veins, with 1 prominent main vein and minor veins diverging from base. Plants semelparous; flowering proceeding from top of stem downward (basipetal), rarely in opposite direction (acropetal). Inflorescences pendulous or erect, branched to 1 order, rarely spicate, usually unisexual by suppression of either female or male flowers; peduncular bracts many, persistent, sheathing or not sheathing peduncle, densely brown or black tomentose adaxially; male flowers borne in spirally arranged pairs, or sometimes triads of 2 male flowers flanking a non-functional female flower, subtended by a very small bract; sepals cupular, lobed or not lobed, sometimes lobes briefly imbricate; petals free, valvate; stamens 3–19, linear, basifixed, pistillode absent; female flowers borne singly and spirally, surrounded by 1 small outer bract and 2 inner, broad, imbricate bracts; sepals united into a low, cupular calyx; petals united into a 3-lobed corolla, lobes valvate distally initially, free and spreading after anthesis; staminodes absent. Fruits variously colored, ovoid to ellipsoid or oblong, with apical stigmatic residue; germination remote; eophylls simple.

Eight species: Bhutan, China, NE India, Laos, Myanmar, Nepal, Thailand, Vietnam; five species in China.

The name *Harina wallichia* Steudel (Nomencl. Bot., ed. 2, 1: 722. 1840), sometimes treated as a synonym of *Wallichia caryotoides*, is of uncertain application.

- 1a. Stems solitary; leaves arranged in 1 or a few planes; pinnae from middle of leaf irregularly arranged in clusters of 3–8 1. *W. disticha*
- 1b. Stems clustered; leaves arranged spirally; pinnae from middle of leaf regularly arranged.
 - 2a. Stems short and subterranean or to 1 m tall, to 40 cm in diam.; pinnae 16 or 17 per side of rachis, ± oblong 2. *W. oblongifolia*
 - 2b. Stems aerial, to 4 m tall, 1.5–10 cm in diam.; pinnae 3–19 per side of rachis, lanceolate or broadly lanceolate.
 - 3a. Stamens 3 3. *W. triandra*
 - 3b. Stamens 6–19.
 - 4a. Pinnae 5–7 per side of rachis; male rachillae 0.5–1.5 cm; female rachillae to 6 cm; stamens 6 or 7 4. *W. gracilis*
 - 4b. Pinnae 8–12 per side of rachis; male rachillae 12.5–20.5 cm; female rachillae 10–20 cm; stamens 11–16 5. *W. caryotoides*

1. *Wallichia disticha* T. Anderson, J. Linn. Soc., Bot. 11: 6. 1869.

二列瓦理棕 er lie wa li zong

Didymosperma distichum (T. Anderson) J. D. Hooker; *Wallichia yomae* Kurz.

Stems solitary, to 9 m tall, 15–25 cm in diam. Leaves arranged in 1 or a few planes; petioles 0.5–1.5 m; rachis 1.8–3.5 m; pinnae 45–73 per side of rachis, linear or linear-lanceolate, shallowly lobed, irregularly arranged in clusters of 3–8 pinnae, spreading in different planes; middle pinnae 56–80 × 5–8 cm. Inflorescences unisexual, male and female borne on same stem, female terminal and male lateral; male inflorescences to 1.2 m, pendulous; rachillae to over 1000, to 30 cm; male flowers to 10 mm; stamens 8–15; female inflorescences to 1 m, pendulous; rachillae 40–50, 30–60 cm. Fruits reddish brown, ellipsoid, to 2.2 × 1.5 cm.

Lowland to montane rain forests, especially in rocky places on steep slopes, often in disturbed areas; below 1200 m. Yunnan [Bangladesh, Bhutan, India, Laos, Myanmar, Thailand].

The sago extracted from the pith of the stems is eaten in times of famine.

2. *Wallichia oblongifolia* Griffith, Calcutta J. Nat. Hist. 5: 486. 1845.

密花瓦理棕 mi hua wa li zong

Harina densiflora (Martius) Walpers; *H. oblongifolia* (Griffith) Griffith; *Wallichia densiflora* Martius.

Stems clustered, short and subterranean or to 1 m tall, to 40 cm in diam. Leaves spirally arranged; petioles to 2 m; rachis 1.5–2.5 m; pinnae 16 or 17 per side of rachis, ± oblong, with several lobes, regularly and alternately arranged, spreading in same plane, proximal 2 or 3 pinnae in a cluster, smallest erect; middle pinnae 45–56 × 7–12 cm, widest near apex. Inflorescences unisexual, male and female borne on separate stems; male inflorescences pendulous, not seen in their entirety; rachillae many, at least to 12 cm; male flowers 7–10 mm; stamens 6; female inflorescences to 1 m, horizontally spreading; rachillae 16–32, to 35 cm; female flowers to 6 mm. Fruits greenish brown to reddish, ovoid to ellipsoid, to 1.5 × 0.8 cm.

Lowland or montane rain forests, especially in rocky places on steep slopes; 200–1200 m. Yunnan [Bangladesh, Bhutan, India, Myanmar, Nepal].

The leaves are used for thatching and making brooms.

3. *Wallichia triandra* (J. Joseph) S. K. Basu, *Principes* 20: 120. 1976.

三药瓦理棕 san yao wa li zong

Asraoa triandra J. Joseph, *Bull. Bot. Surv. India* 14: 144. 1975.

Stems clustered, to 3 m tall, 3–5 cm in diam. Leaves spirally arranged; petioles not seen; rachis to 2 m; pinnae 11–19 per side of rachis, lanceolate, with 2 pronounced lobes, regularly arranged, spreading in same plane; middle pinnae to 40 × 10 cm. Inflorescences unisexual, female terminal and male lateral; male inflorescences to 35 cm, erect; rachillae to 16 cm; male flowers to 8 mm; stamens 3; female inflorescences to 35 cm, erect; rachillae 20–30 cm; female flowers ca. 4 mm. Fruits red, oblong, to 1.3 × 0.7 cm.

Montane rain forests on steep slopes; 900–2000 m. Xizang [NE India].

4. *Wallichia gracilis* Beccari, *Webbia* 3: 211. 1910.

瓦理棕 wa li zong

Wallichia chinensis Burret.

Stems clustered, to 1.5 m tall, 2–2.5 cm in diam. Leaves spirally arranged; petioles 1–1.7 m; rachis 0.45–1.2 m; pinnae 5–7 per side of rachis, lanceolate, with 2 lobes, regularly arranged, spreading in same plane; middle pinnae 30–40 × 6–9 cm. Inflorescences unisexual, subtended by smaller leaves, male or female terminal; male inflorescences 12–25 cm, pendulous; rachillae many, 0.5–1.5 cm, short and crowded on rachis; male flowers to 5 mm; stamens 6 or 7; female inflorescences to 35 cm, pendulous; rachillae many, to 6 cm; female flowers ca. 2 mm. Fruits yellow, ovoid to ellipsoid, to 1.5 × 1 cm.

Lowland rain forests; 200–1000 m. Guangxi [Vietnam].

5. *Wallichia caryotoides* Roxburgh, *Pl. Coromandel* 3: 91. 1820.

琴叶瓦理棕 qin ye wa li zong

Harina caryotoides (Roxburgh) Buchanan-Hamilton; *Wallichia mooreana* S. K. Basu; *W. siamensis* Beccari; *Wrightea caryotoides* (Roxburgh) Roxburgh.

Stems clustered, to 3 m tall, 2–10 cm in diam. Leaves spirally arranged; petioles 0.8–1.5 m; rachis 0.9–1.5 m; pinnae 8–12 per side of rachis, lanceolate, with 2 pronounced lobes, regularly and alternately arranged except for clustered proximal 2 or 3 pinnae, spreading in same plane; middle pinnae 25–49 × 5–11 cm. Inflorescences unisexual, subtended by smaller leaves, male and female borne on same or separate stems, female terminal, male lateral; male inflorescences 40–50 cm, erect; rachillae 21–30, 12.5–20.5 cm; male flowers 5–6 mm; stamens 11–16; female inflorescences 40–50 cm, erect; rachillae 7–17, 10–20 cm; female flowers to 2.5 mm at anthesis. Fruits red, ovoid to ellipsoid, to 1.7 × 0.8 cm.

Lowland to montane rain forests, especially in rocky places on steep slopes; below 1800 m. Yunnan [Bangladesh, Myanmar, Thailand].

