
桄榔属 guang lang shu

Blancoa Blume (1843), not Lindley (1840); Didymosperma H. Wendland & Drude; Gomatus Corrèa; Saguerus Steck.

Under story shrubs to large trees. Stems clustered, sometimes spreading by stolons, less often solitary, usually covered with persistent, fibrous leaf bases. Leaves 5–30, pinnate, seldom undivided; leaf sheaths open, fibrous, commonly persisting on stems; petioles usually covered with distinctive scales; pinnae linear to rhomboid, sometimes lobed on margins, always jagged at apices, bases sometimes with an ear-shaped projection overlapping rachis; pinnae regularly or irregularly arranged, basal few borne in clusters, silvery gray abaxially. Plants usually semelparous; flowering proceeding from top of stem downward (basipetal), rarely in opposite direction (acropetal). Inflorescences branched to 2 orders, rarely spicate, borne among leaves, usually unisexual by suppression of either female or male flowers, solitary or rarely several at a node, covered with several persistent bracts, female inflorescences commonly produced first at apex of stem, and male ones later, below; rachillae 1–100 or more; flowers borne in triads with a central female flower and 2 lateral male flowers. Fruits red, yellowish, or purplish, large, ellipsoid, globose, ovoid, or oblong, 1–3-seeded; mesocarp with irritant crystals of calcium oxalate; endosperm homogeneous; germination remote; eophylls undivided or bifid with jagged margins.

Twenty-one species: from India through SE Asia reaching to New Guinea and Australia; six species (two endemic, one introduced) in China.

1a. Pinnae fewer, to 10 per side of rachis, variously shaped, often rhomboid or lobed, less often linear, without ears at bases.
   2a. Inflorescences with 2–8 rachillae .................................................................................................................. 5. A. longicarpa
   2b. Inflorescences with 1(–3) rachillae ................................................................................................................ 6. A. caudata

1b. Pinnae many, to 150 per side of rachis, linear, usually with ears at bases.
   3a. Stems clustered ........................................................................................................................................... 1. A. engleri
   3b. Stems solitary.
      4a. Stems to 20 m tall; pinnae irregularly arranged and spreading in different planes; cultivated ........................................ 2. A. pinnata
      4b. Stems to 12 m tall; pinnae regularly arranged and spreading in same plane; naturally occurring.
      5a. Stems to 12 m tall (lowland forests, usually below 600 m) ................................................................. 3. A. westerhoutii
      5b. Stems to 8 m tall (montane forests, 1400–2200 m) ................................................................................ 4. A. micrantha


山棕 shan zong

Didymosperma engleri (Beccari) Warburg.

Stems clustered, to 4 m tall, 10–15 cm in diam. Leaf petioles to 1.8 m; rachis to 3 m; pinnae 38–41 per side of rachis, linear, very briefly lobed along margins, without ears at bases, regularly arranged and spreading in same plane except for basal few pinnae; middle pinnae 43–49 cm, ca. 2 cm wide at mid-point. Inflorescences to 60 cm; male rachillae 40–50 cm; female rachillae 25–57 cm; male flowers 8–14 mm; sepals 2–3 mm; petals 9–14 mm; stamens 25–37; female rachillae many, 27–32 cm; female flowers ca. 3 mm; sepals ca. 2.5 mm; petals ca. 3 mm. Fruits orange or red, globose, ca. 1.5 cm in diam.

- Open places or lowland rain forests; below 900 m. Taiwan; cultivated in other areas.


砂糖椰子 sha tang ye zi

Saguerus pinnatus Wurmb, Verh. Batav. Genootsch. Kunst. 1: 351. 1779; Arenga gamuto Merrill; A. griffithii Seemann ex H. Wendland; A. saccharifera Labillardièrè; Borassus gomutus Loureiro; Caryota onusta Blanco; Gomatus rumphii Corrèa; G. saccharifer (Labillardièrè) Sprengel; G. vulgaris Oken; S. gamuto Houttuyn; S. rumphii (Corrèa) Roxburgh; S. saccharifer (Labillardièrè) Blume; Sagus gomutus (Loureiro) Perrottet.

Stems solitary, to 20 m tall, 40–60 cm in diam. Leaf petioles to 1.5 m; rachis to 5 m; pinnae to 150 per side of rachis, linear, with ears at bases, irregularly arranged and spreading in different planes; middle pinnae 120–160 cm, 5–9 cm wide at mid-point. Inflorescences to 2.5 m; male rachillae 40–50, to 40 cm; male flowers 12–15 mm; sepals ca. 5 mm; petals ca. 12 mm; stamens 60–120; female rachillae 40–50, ca. 30 cm; female flowers 10 mm; sepals ca. 2 mm; petals ca. 4 mm. Fruits greenish, yellowish, or orangish, globose to ovoid, to 7 × 6 cm.

Cultivated near villages or in towns. Fujian (Xiamen), Guangdong (Guangzhou), Hainan, Yunnan [native to NE India (Assam), Indonesia, Malaysia, Myanmar, Philippines, and Thailand; introduced elsewhere].

Arenga pinnata, the “sugar palm,” was formerly an important source of sugar derived from tapping the inflorescences, especially in Malaysia and Indonesia. Tapping is still carried out on a local scale. There are many other minor uses. It is relatively rare in China and only occasionally planted.


桄榔 guang lang

Saguerus westerhoutii (Griffith) H. Wendland & Drude.

Stems solitary, to 12 m tall, 40–60 cm in diam. Leaf peti-
oles 1–1.8 m; rachis 3–4 m; pinnae 80–150 per side of rachis, linear, with ears at bases, regularly arranged and spreading in same plane except for basal few pinnae; middle pinnae to 130 cm, to 9.5 cm wide at mid-point. Inflorescences to 3 m; male rachillae 60–70, to 60 cm; male flowers 20–25 mm; petals 20–25 mm; stamens 200–300; female rachillae ca. 40, 80–120 cm; female flowers to 10 mm; sepals ca. 5 mm; petals ca. 10 mm. Fruits greenish black, globose, to 7 cm in diam.

Lowland rain forests; below 600(–1400) m. Guangxi, Hainan, Yunnan [Cambodia, Laos, Malaysia (Peninsular), Myanmar, Thailand, Vietnam].

_Arenga westerhoutii_ is quite common in Yunnan, where it can be easily identified by its large size and regularly arranged leaflets. The leaves are used for thatching, and the palm heart is occasionally eaten.


_小花桄榔_ xiao hua guang lang

Stems solitary, 2–8 m tall, to 15 cm in diam. Leaf petioles to 1 m; rachis to 2 m; pinnae many per side of rachis, linear-lanceolate, very briefly lobed along margins, with ears at bases, regularly arranged and spreading in same plane except for basal few pinnae; middle pinnae 30–36 cm, 3–4 cm wide at mid-point. Inflorescences 80–100 cm; male rachillae to 100, to 17 cm; male flowers 4–5.5 mm; sepals ca. 2 mm; petals ca. 5.5 mm; stamens 9–23; female inflorescences not known. Fruits not known.

Montane rain forests; 1400–2200 m. Xizang [Bhutan, India].


_长果桄榔_ chang guo guang lang

Stems clustered, 2–3 m tall, to 7 cm in diam. Leaf petioles 2–2.5 m; rachis to 2 m; pinnae few per side of rachis, rhomboid, lobed along distal margins, without ears at bases, regularly arranged and spreading in same plane except for basal few pinnae; middle pinnae to 40 cm, to 5 cm wide at mid-point. Inflorescences to 50 cm; male rachillae 2–8, to 20 cm; male flowers 8–9 mm; sepals to 3 mm; petals ca. 15 mm; stamens 6–20; female rachillae 2–8, to 35 cm; female flowers not known. Fruits red to purple, ovoid to oblong, curved, ca. 1.8 × 1 cm.

- Lowland rain forests or deciduous forests; sometimes on limestone outcrops; below 700 m. Guangxi, Hainan [Cambodia, Laos, Myanmar, Thailand, Vietnam].

The leaves are used to weave hats.


_双籽棕_ shuang zi zong

_Borassus caudatus_ Loureiro, Fl. Cochinch. 2: 619. 1790 ["caudata"]; _Arenga hookeriaca_ (Beccari) Whitmore; _Blancoa caudata_ (Loureiro) Kuntze; _Didymosperma caudatum_ (Loureiro) H. Wendland & Drude; _D. caudatum_ var. _stenophyllum_ Beccari; _D. caudatum_ var. _tonkinense_ Beccari; _D. hookeriaca_ (Beccari) Beccari; _D. tonkinense_ (Beccari) Beccari ex Gagnepain; _Wallichia caudata_ (Loureiro) Martius.

Stems clustered, to 1.5 m tall, 1–2 cm in diam. Leaf peti-