

## 8. ETLINGERA Giseke, Prael. Ord. Nat. Pl. 209. 1792.

茴香砂仁属 hui xiang sha ren shu

*Achasma* Griffith; *Diracodes* Blume, nom. rej.; *Geanthus* Reinwardt (1828), not Rafinesque (1814) nor Philippi (1884); *Nicolaia* Horaninow, nom. cons.

Rhizomes creeping. Pseudostems robust. Leaves petiolate, lanceolate, large. Inflorescence arising from rhizomes, a spike or head with flowers arranged in 3 or 4 concentric circles on a flat receptacle, base surrounded by numerous sterile, involucrel bracts; peduncle raised well above ground and long, or embedded in ground and short; bracts 1-flowered; bracteoles long tubular. Calyx tubular, membranous, split on 1 side, apex 3-toothed. Corolla tube equaling or longer than calyx; lobes 3, much shorter than tube. Lateral staminodes absent. Labellum tongue-shaped, ± 3-lobed, much longer than corolla lobes, base adnate to filament forming a distinct tube; central lobe colored, apex entire or 2-lobed; lateral lobes basally folded over stamen. Stamen shorter than labellum; free part of filament very short and rather broad; anther bent forward; connective appendage absent. Ovary 3-loculed; ovules numerous per locule. Capsule fleshy, indehiscent, smooth, longitudinally ridged, or with obtuse warts in rows.

About 70 species: China, India, Indonesia, Malaysia, Thailand; N Australia; three species (one endemic, one introduced) in China.

- 1a. Peduncle raised well above ground, long, 0.8–1(–1.5) m ..... 1. *E. elatior*  
 1b. Peduncle embedded in ground, short.  
     2a. Calyx 3.5–4 cm; labellum yellow at margin, free part 2.5–3 cm ..... 2. *E. yunnanensis*  
     2b. Calyx 6.5–7 cm; labellum bright red at margin, free part 4.5–5.5 cm ..... 3. *E. littoralis*

**1. *Etlingera elatior*** (Jack) R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 43: 244. 1986.

火炬姜 huo ju jiang

*Alpinia elatior* Jack, Malayan Misc. 2(7): 2. 1822; *A. speciosa* (Blume) D. Dietrich (1839), not (J. C. Wendland) K. Schumann (1893); *Elettaria speciosa* Blume; *Nicolaia elatior* (Jack) Horaninow; *N. speciosa* (Blume) Horaninow; *Phaenomeria speciosa* (Blume) Koorders.

Pseudostems closely grouped, to 5 m. Ligule 2-lobed, to 1.5 cm, glabrous; petiole 3–4 cm; leaf blade lanceolate, to 80 × 18 cm, glabrous. Inflorescence surrounded by involucrel bracts; peduncle raised well above ground, long, 0.8–1(–1.5) m, robust; involucrel bracts red, tapering toward apex, 2–3 × ca. 1 cm, glabrous; floral bracts similar to involucrel bracts but pinkish, smaller; bracteoles tubular, ca. 2 cm, deeply split on 1 side. Calyx 3–4 cm, apex 3-toothed. Corolla pink to red, sometimes white. Labellum deep red with yellow margin. Filament short, flat, whitish pubescent; anther red, longer than filament. Fruiting head greenish or reddish, globose, ca. 2.5 cm in diam. Seeds many, black.

Cultivated for ornament, possibly naturalized in forests at lower elevations. Yunnan [native to Indonesia, Malaysia, and S Thailand; widely cultivated and naturalized in SE Asia].

**2. *Etlingera yunnanensis*** (T. L. Wu & S. J. Chen) R. M. Smith, Notes Roy. Bot. Gard. Edinburgh 43: 251. 1986.

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*Achasma yunnanense* T. L. Wu & S. J. Chen, Acta Phytotax. Sin. 16(3): 40. 1978.

Pseudostems tufted, 2–3 m. Ligule ovate, entire, 1–1.5 cm; petiole ca. 5 mm; leaf blade lanceolate, 50–60 × 7–5.5 cm, glabrous. Inflorescence a head borne on surface of ground (resembling a capitulum of *Chrysanthemum* Linnaeus); peduncle embedded in ground, short; bracts red, ovate, 2.5–3 × 2–3 cm; bracteoles tubular, ca. 2.7 cm × 7 mm. Flowers numerous, 6 opening together in a circle, red. Calyx 3.5–4 cm, apex 3-tooth-

ed. Corolla shorter than calyx. Labellum exerted from corolla, purple at center, yellow at margin, free part 2.5–3 cm, apex 2-cleft. Free part of filament ca. 5 mm; anther 6–8 mm. Ovary ca. 5 mm, pubescent. Style flat. Capsule turbinate, 2.5–3 cm, densely pubescent. Fl. Jun.  $2n = 48^*$ .

• Forests; ca. 600 m. S Yunnan (Xishuangbanna Dai Zu Zizhizhou).

**3. *Etlingera littoralis*** (J. König) Giseke, Prael. Ord. Nat. Pl. 209. 1792.

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*Amomum littorale* J. König in Retzius, Observ. Bot. 3: 52. 1783; *Achasma megalochilos* Griffith; *Amomum megalochilos* (Griffith) Baker; *Hornstedtia megalochilos* (Griffith) Ridley.

Pseudostems 2–3 m. Ligule oblong, 6–13 mm, apex acuminate; petiole 0.5–3 cm; leaf blade abaxially light brown when dry, oblong to oblong-lanceolate, 50–70 × 9–15 cm, glabrous except hairy along midvein and at margin abaxially, base sub-rounded or attenuate, oblique, apex shortly acuminate. Inflorescence a head, ca. 10 cm in diam. at anthesis; peduncle embedded in ground, short, 1–3 cm; bracts ovate or oblong, 3–5 × 1.5–2 cm; bracteoles tubular, ca. 4.5 cm. Flowers 4–12 opening together, red. Calyx 6.5–7 cm, split to middle on 1 side, apex 3-toothed. Corolla tube 3–5 cm; lobes oblong, 2.2–2.6 cm × 5–7 mm. Labellum bright red at margin, obovate-oblong, free part 4.5–5.5 × 1.5–2 cm, base expanded, middle slightly narrowed, margin incurved, apex entire or emarginate. Filament ca. 1 cm; anther ca. 1 cm, apex emarginate. Ovary densely pilose. Style 5–6.5 cm; stigma rhombic, ciliate. Capsule globose, ca. 3 cm in diam., pubescent. Fl. Apr–May.  $2n = 48^*$ .

Forest floors; 200–300 m. Hainan [Indonesia (Borneo, Java, Sumatra), Malaysia, Thailand].

