

13. HETAERIA Blume, Bijdr. 409. 1825 [“*Etaeria*”], nom. cons.

翻唇兰属 fan chun lan shu

Chen Xinqi (陈心启 Chen Sing-chi); Stephan W. Gale, Phillip J. Cribb, Paul Ormerod

Cerochilus Lindley; *Goodyera* sect. *Rhamphidia* Lindley; *Rhamphidia* (Lindley) Lindley.

Herbs, terrestrial. Rhizome ascending, elongate, several noded, fleshy; roots arising from rhizome nodes, elongate, fleshy, pubescent. Stem glabrous, leafy. Leaves subsulate or scattered along stem, narrowly ovate to elliptic, usually asymmetric, membranous to slightly fleshy, with a petiole-like base dilating into tubular amplexicaul sheath. Inflorescence pubescent, with a few scattered sheathing sterile bracts and several to many flowers in a terminal raceme. Flowers not resupinate; ovary not (or rarely slightly) twisted, glabrous or pubescent. Sepals free, similar, outer surface glabrous or pubescent; lateral sepals embracing base of lip. Petals connivent with dorsal sepal and forming inverted hood, usually narrower than sepals, membranous; lip adnate to margin of column, 2-partite or with a short mesochile and 3-partite; hypochile concave, saccate or cupular, containing 1 to several papillose, warty or lamellate calli on either side of midvein; mesochile (when present) with involute margin; epichile entire and tapering or 2-lobed. Column short, with thin to fleshy winglike appendages at apical margin; anther ovoid, 2-locular; pollinia 4, in 2 pairs, clavate, granular-farinaceous, basally attenuate into short caudicles, attached to solitary ovate viscidium; rostellum erect, relatively long, bifid; stigma lobes separate and placed at apical corners of column. Capsule erect, fusiform.

About 30 species: tropical Africa and Asia, extending to New Guinea, NE Australia, and the Pacific islands; six species in China.

Records of *Hetaeria cristata* Blume from Taiwan and Hong Kong are based on misidentifications of *Rhomboda tokioi* and *R. abbreviata*, respectively (see p. 68).

- 1a. Lip 3-partite; mesochile short, slender, with involute margin; epichile enlarged, with 2 suborbicular lobes
ca. 2.5 × 2.5 mm 1. *H. anomala*
- 1b. Lip 2-partite, lacking a mesochile; epichile very small, entire.
 - 2a. Epichile narrowly linear or slightly dilated and broadly ovate; petals obliquely (sub)spatulate.
 - 3a. Leaves 7.5–13 cm; epichile broadly ovate, ca. 0.5 mm; hypochile calli fleshy, oblong, 2–4-lobed 5. *H. affinis*
 - 3b. Leaves 6–7 cm; epichile narrowly linear, ca. 1.8 mm; hypochile calli lamellate, suboblong, toothed 6. *H. obliqua*
 - 2b. Epichile abruptly attenuate; petals obliquely obovate or rhombic-obovate.
 - 4a. Leaves 8–11 cm; dorsal sepal ca. 3.5 mm; epichile ca. 0.5 mm, lateral margin not involute, apex subacute 4. *H. oblongifolia*
 - 4b. Leaves 3–9 cm; dorsal sepal 5–7 mm; epichile 1–1.8 mm, lateral margin involute, apex acuminate-apiculate.
 - 5a. Sepals weakly pubescent on outer surface; hypochile calli papillose, hooked, not divided 2. *H. finlaysoniana*
 - 5b. Sepals densely pubescent on outer surface; hypochile calli warty, 2- or 3-lobed 3. *H. youngsayei*

1. *Hetaeria anomala* Lindley, J. Proc. Linn. Soc., Bot. 1: 185. 1857 [“*Aetheria*”].

四腺翻唇兰 si xian fan chun lan

Hetaeria biloba (Ridley) Seidenfaden & J. J. Wood; *H. grandiflora* Ridley; *H. hainanensis* Tang & F. T. Wang; *H. rotundiloba* J. J. Smith; *Heterozeugine rotundiloba* (J. J. Smith) C. S. Leou; *Zeuxine biloba* Ridley.

Plants 28–34 cm tall. Stem 3–7-leaved. Leaves scattered along stem, ovate-lanceolate, 3.5–7 × 1.1–2 cm, 3-veined, base obtuse, apex acute or acuminate; petiole-like base and sheath 1.5–2 cm. Inflorescence erect, villous, with 1–3 sterile bracts; rachis laxly to subdensely 4–20-flowered, 2–10 cm; floral bracts lanceolate, ca. 7 mm, abaxially villous, margin ciliate. Flowers white; ovary not twisted, often arcuate, subcylindric or ellipsoid, 7–8 mm including pedicel, hispid. Sepals ca. 5 mm, abaxially sparsely hispid, 3-veined; dorsal sepal elliptic, concave, ca. 2 mm wide, apex acute; lateral sepals ovate, somewhat oblique, ca. 2.4 mm wide, apex acute. Petals linear, ca. 5 × 0.6 mm, glabrous, 1-veined, apex obtuse; lip ca. 5 mm, 3-partite;

hypochile concave to shallowly saccate, 5-veined, lateral veins each with 1 lamellate, transversely oblong, hooked callus; mesochile short, ca. 1 mm, margin involute; epichile dilated, ca. 6 mm wide, 2-lobed; lobes strongly revolute but divaricate in unfolded state, suborbicular, ca. 2.5 × 2.5 mm, apex slightly emarginate. Column ca. 3 mm; wings reduced; rostellum arms ca. 1.5 mm. Fl. Feb–Mar.

Dense or sparse forests; 800–1000 m. Hainan, C and S Taiwan [NE India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam].

2. *Hetaeria finlaysoniana* Seidenfaden, Contr. Orchid Fl. Thailand 13: 10. 1997.

长序翻唇兰 chang xu fan chun lan

Goodyera elongata Lindley, Gen. Sp. Orchid. Pl. 494. 1840; *Hetaeria elongata* (Lindley) J. D. Hooker (1890), not (Blume) Miquel (1859); *Rhamphidia elongata* (Lindley) Lindley.

Plants 30–35 cm tall. Stem 4- or 5-leaved. Leaves scattered along stem, oblong to narrowly elliptic, slightly to strongly

unequal, 6–9 × 2.5–4 cm, base obtuse-rounded, apex acute; petiole-like base and sheath 1.5–3 cm. Inflorescence elongate, 15–22 cm, slender, pubescent; sterile bracts 2 or 3, pink, lanceolate, abaxially weakly pubescent; rachis 8–12 cm, subdensely many flowered; floral bracts pink, lanceolate, 8–9 mm, slightly shorter than ovary, abaxially weakly pubescent, apex acuminate. Flowers half opening, small; ovary subcylindric, not twisted, 10–11 mm including pedicel, densely pubescent. Sepals pink to whitish, outer surface weakly pubescent, 3-veined; dorsal sepal oblong to ovate-oblong, concave, 5–6 × 2.8–3 mm, apex obtuse; lateral sepals obliquely oblong to ovate-oblong, 5–6 × 2.8–3 mm, apex obtuse. Petals white, obliquely rhombic-obovate, 5–6 × ca. 2.5 mm, 2-veined, apex narrowed and apiculate; lip cymbiform, suboblong to oblong-lanceolate, 4–4.5 × 2–2.3 mm; hypochile saccate, 5-veined, lateral veins each with 1–3 papillose, hooked calli near base; epichile attenuate, ca. 1.8 mm, lateral margin involute, apex acuminate-apiculate. Column ca. 2 mm; wings subsquare to oblong flaps; rostellum arms ca. 1 mm. Fl. Sep–Oct.

Dense forests. SW Guangxi, Hainan [Sri Lanka, Thailand].

3. *Hetaeria youngsayei* Ormerod, Oasis Suppl. 3: 7. 2004.

香港翻唇兰 xiang gang fan chun lan

Hetaeria shiuyingiana L. Li & F. W. Xing.

Plants 20–40 cm tall. Stem slender, 2–5-leaved. Leaves cauline or crowded at stem apex, broadly ovate, oblique, 3–8 × 2–4 cm, 3-veined, base obliquely obtuse, apex shortly acuminate; petiole-like base and sheath 2–3 cm. Inflorescence 20–22 cm, slender, villous; sterile bracts 3 or 4, pinkish brown, lanceolate, glabrous; rachis subdensely 14–20-flowered, 7–9 cm, glandular pubescent; floral bracts lanceolate, 7–9 mm, shorter than ovary, puberulent, apex acuminate. Flowers half opening; ovary and pedicel held close to rachis, olive-green, subcylindric, not twisted, 8–10 mm, densely glandular pubescent. Sepals pink, tinged olive-green at base, ovate, outer surface densely glandular pubescent, 3-veined, apex acute; dorsal sepal 5–7 × 2–4 mm, apex recurved; lateral sepals oblique, 5–6 × ca. 2 mm. Petals spreading, white, obliquely obovate, 4–6 × 2.2–3 mm, 1-veined, apex obtuse; lip broadly ovate-cymbiform, 4.5–5 mm, fleshy, 2-partite; hypochile yellowish, concave, ca. 3 × 2.5 mm, containing several warty, 2- or 3-lobed calli, 5-veined, distal margin slightly involute; epichile white, 1–1.5 mm, attenuate, margin involute, apex acuminate-apiculate. Column ca. 2 mm, stout; wings broad, oblong flaps; rostellum arms ca. 1 mm. Fl. Mar–Apr.

Forests, ravines; 600–900 m. Hainan, Hong Kong [Thailand].

This taxon has been confused with *Hetaeria nitida* Ridley (J. Linn. Soc., Bot. 32: 404. 1896). See Ormerod (Oasis Suppl. 3: 7. 2004) and Li and Xing (Novon 19: 187–190. 2009) for further discussion.

4. *Hetaeria oblongifolia* Blume, Bijdr. 410. 1825.

矩叶翻唇兰 ju ye fan chun lan

Epipactis discoidea (H. G. Reichenbach) A. A. Eaton; *E. erimae* (Schlechter) A. A. Eaton; *Goodyera discoidea* (H. G. Reichenbach) Schlechter; *G. erimae* Schlechter; *Hetaeria dis-*

coidea (H. G. Reichenbach) Schlechter; *H. erimae* (Schlechter) Schlechter; *H. forcipata* H. G. Reichenbach; *H. helferi* J. D. Hooker; *H. micrantha* Blume; *H. pauciseta* J. J. Smith; *H. raymundii* Schlechter; *H. rubicunda* H. G. Reichenbach; *H. samoensis* Rolfe; *H. similis* Schlechter; *H. tenuis* (Lindley) Bentham; *Rhamphidia discoidea* H. G. Reichenbach; *R. rubicunda* (H. G. Reichenbach) H. G. Reichenbach (1868), not (Blume) F. Mueller (1869); *R. tenuis* Lindley.

Plants 30–50 cm tall. Stem fleshy, 4–6-leaved. Leaves cauline, oblong, oblique, 8–11 × 2.5–4.1 cm, 3-veined, base obliquely obtuse or rounded, apex acute; petiole-like base and sheath 2.8–3.3 cm. Inflorescence 24–26 cm, slender, pubescent; sterile bracts 4, pinkish brown, lanceolate, glabrous to sparsely pubescent; rachis subdensely 30–40-flowered, 8–10 cm, pubescent; floral bracts lanceolate, 7–9 mm, subequal in length to ovary, puberulent, margins ciliate below middle, apex acuminate. Flowers half opening; ovary and pedicel held close to rachis, olive-green, subcylindric, not twisted, 4.5–5.5 mm, densely pubescent. Sepals white, tinged light yellowish green at base, broadly ovate, outer surface densely pubescent, apex obtuse; dorsal sepal ca. 3.5 × 2.5 mm; lateral sepals oblique, ca. 4 × 2.2 mm. Petals incurved at apex, white, narrowly rhombic-obovate, falcate, ca. 4 × 1.3 mm, apex subacute; lip cream-colored, broadly ovate-cymbiform, ca. 4 mm, 2-partite, fleshy toward apex; hypochile saccate, ca. 3.5 mm, containing 8–10 papillous calli, distal margin involute; epichile ligulate, attenuate, ca. 0.5 mm, apex subacute. Column ca. 2.2 mm, stout; wings small, ovate; rostellum arms small, linear, ca. 0.5 mm. Fl. Mar–Apr.

Montane forests; ca. 200 m. S Taiwan (Lan Yu) [Indonesia, S Japan, Malaysia, Myanmar, New Guinea, Philippines, Thailand, Vietnam; Australia, SW Pacific islands].

5. *Hetaeria affinis* (Griffith) Seidenfaden & Ormerod, Oasis Suppl. 2: 9. 2001.

滇南翻唇兰 dian nan fan chun lan

Goodyera affinis Griffith, Not. Pl. Asiat. 3: 391. 1851; *Cerochilus rubens* Lindley; *Hetaeria rubens* (Lindley) Bentham

ex J. D. Hooker; *Rhamphidia rubens* (Lindley) Lindley.

Plants 25–45 cm tall. Stem somewhat robust, with 6–8 well-spaced leaves. Leaves ovate or elliptic, slightly oblique, 7.5–13 × 3.5–5.5 cm, 5-veined, base obtuse, apex acute; petiole-like base and sheath 2.5–5 cm. Inflorescence 16–28 cm, slender, pubescent; sterile bracts 3–5, lanceolate, abaxially weakly pubescent; rachis densely many flowered, 7–14 cm, densely glandular pubescent; floral bracts lanceolate, 7–8 × ca. 3 mm, nearly as long as ovary, puberulent, apex acuminate. Flowers opening slightly, small; ovary and pedicel subcylindric, not twisted, 8–9 mm, densely glandular pubescent. Sepals green, adaxial apex tinged with pink, outer surface densely glandular pubescent; dorsal sepal broadly ovate, cymbiform, ca. 5 × 3.5 mm, 3-veined, apex obtuse to acute; lateral sepals broadly ovate, concave, slightly oblique, ca. 4.2 × 3.2 mm, 1-veined, apex obtuse. Petals white, obliquely spatulate, ca. 4.5 × 1.6 mm, 1-veined, apex slightly mucronate; lip lageniform-ovate, ca. 3.5 mm, 2-partite; hypochile dilated, concave, ca. 3 × 3.8 mm, 1-veined, containing a solitary, warty, 2–4-lobed callus on either side of midvein, distal margin slightly involute; epichile dilated, broadly ovate, ca. 0.5 × 0.8 mm, apex obtuse. Column ca. 2 mm; wings small, narrow; rostellum arms to 0.8 mm. Fl. Mar–Apr. $2n = 22, 24, 42$.

Dense forests; 800–1000 m. S and SE Yunnan [Bhutan, NE India, N Myanmar, Thailand, Vietnam].

6. *Hetaeria obliqua* Blume, Coll. Orchid. 104. 1859.

斜瓣翻唇兰 xie ban fan chun lan

Dossinia obliqua (Blume) Miquel.

Plants 30–37 cm tall. Stem 4- or 5-leaved. Leaves scattered along stem, elliptic to oblong-ovate, oblique, 6–7 × 2.5–3.5 cm, base obtuse-rounded, apex acute; petiole-like base and sheath 2–2.5 cm. Inflorescence 18–23 cm, pubescent, with 4 or 5 sterile bracts; rachis 8–11 cm, with many densely arranged flowers; floral bracts lanceolate, 6–7 mm, shorter than ovary, abaxially puberulent, apex acuminate. Flowers small; ovary subcylindric, not twisted, 8–9 mm including pedicel, pubescent. Sepals 3-veined, outer surface pubescent; dorsal sepal ovate, concave, ca. 5.8 × 3 mm, apex obtuse; lateral sepals ovate-oblong, ca. 5.5 × 2.1 mm, apex obtuse. Petals white, obliquely subspatulate, ca. 5 × 1.6 mm, glabrous, 1-veined, apex obtuse; lip white, suboblong, cymbiform, ca. 4.5 × 2 mm; hypochile concave, 3-veined, lateral veins each with 1 or 2 suboblong, lamellate, toothed calli toward base; epichile a narrow, sublinear blade, ca. 1.8 mm, lateral margin involute. Column 2.5–3 mm; wings shallow, broad; rostellum arms linear, ca. 1.2 mm. Fl. Mar.

Dense forests. Hainan [Indonesia, Malaysia, Thailand].

