

111. PANISEA (Lindley) Lindley, Fol. Orchid. 5(Panisea): 1. 1854, nom. cons.

曲唇兰属 qu chun lan shu

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Coelogyne sect. *Panisea* Lindley, Gen. Sp. Orchid. Pl. 44. 1830; *Androgyne* Griffith; *Sigmatogyne* Pfitzer; *Zetagyne* Ridley.

Herbs, epiphytic or lithophytic. Rhizome creeping. Pseudobulbs close together, cylindric to ovoid-globose, sometimes prostrate basally, 1- or 2-leaved. Leaves conduplicate, petiolate to sessile, linear-lanceolate, thinly leathery, acute. Inflorescence synanthous, proteranthous, or heteranthous, 1–8-flowered, erect to decurved; floral bracts persistent, shorter than ovary. Flowers resupinate, variously colored. Sepals free, similar, lateral sepals often oblique or slightly narrower and longer. Petals similar to sepals, often shorter and narrower; lip entire or 3-lobed; lateral lobes small, not clasping column, sometimes basally sigmoid, often with short keels or lamellae. Column ca. as long as or much shorter than lip, with or without stolidia, foot abbreviated or almost absent; anther overhanging; pollinia 4, obliquely obovoid, with caudicles; stigma cup-shaped; rostellum large. Capsule ellipsoid.

Seven species: Bhutan, Cambodia, China, NE India, Laos, Myanmar, Nepal, Thailand, Vietnam; five species (one endemic) in China.

Panisea albiflora (Ridley) Seidenfaden (Contr. Revis. Orchid Fl. Cambodia, Laos & Vietnam, 87. 1975; *Zetagyne albiflora* Ridley, J. Nat. Hist. Soc. Siam 4: 118. 1921), described from Vietnam, was recorded from Hainan (Changjiang, 1300–1400 m) by X. Q. Song, Q. W. Meng and Y. B. Luo (Acta Bot. Yunnan. 31: 32. 2009). The present authors could not confirm this because they have not seen the specimen (*X. Q. Song 08003*, PE).

- 1a. Lip with very small lateral lobes 3. *P. uniflora*
- 1b. Lip entire.
 - 2a. Lip ecallose.
 - 3a. Inflorescences 5–8-flowered 5. *P. demissa*
 - 3b. Inflorescences 1- or 2-flowered 4. *P. yunnanensis*
 - 2b. Lip with lamellae or callus on disk.
 - 4a. Pseudobulbs suberect, borne at some distance from each other on creeping rhizome 1. *P. tricallosa*
 - 4b. Pseudobulbs prostrate in lower part, connected to each other by many separate short rhizomes 2. *P. cavaleriei*

1. *Panisea tricallosa* Rolfe, Bull. Misc. Inform. Kew 1901: 148. 1901.

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Panisea bia (Kerr) Tang & F. T. Wang; *P. pantlingii* (Pfitzer) Schlechter; *P. unifolia* S. C. Chen; *Sigmatogyne bia* Kerr; *S. pantlingii* Pfitzer; *S. tricallosa* (Rolfe) Pfitzer.

Rhizome 2–3 mm in diam., branched, rooting on nodes, with membranous sheaths. Pseudobulbs rather dense, often tufted, erect or suberect, brown when dry, narrowly ovoid or subellipsoid, 7–20 × 4–10 mm, wrinkled when dry, base conspicuously contracted, apex 1- or 2-leaved. Leaf blade narrowly elliptic or suboblong, 3–6 × (0.5–)0.8–2.3 cm, acute or obtuse; petiole 4–13 cm. Inflorescence proteranthous, 1-flowered; peduncle 2–3 cm; floral bracts ovate, 3–5 mm, scarious. Flowers pale yellow or greenish, 2–2.5 cm in diam., lip with 3 small spots at base, calli on disk orange, column pale yellow; pedicel and ovary ca. 1 cm. Sepals narrowly ovate, oblong-ovate, or broadly lanceolate, 12–19 × ca. 5 mm, dorsally carinate, 5-veined, acuminate; lateral sepals slightly oblique. Petals ovate-oblong or nearly broadly lanceolate, 13–18 × ca. 4 mm, 3-veined, acute to acuminate; lip obovate-oblong to spatulate, 10–20 × 6–7 mm, sigmoid at base, entire, inconspicuously undulate, truncate, apiculate, or subrounded; disk with 2 or 3 short longitudinal lamellae. Column 5–7 mm, both sides winged; wings very narrow in lower part, upper part 1–1.5 mm wide on one side, apex surrounding column and irregularly incised; foot inconspicuous. Capsule subobovoid-ellipsoid, hexagonal, ca. 2 × 1–1.3 cm, each ridge with a wing ca. 1.5 mm wide. Fl. Dec, fr. next May–Jun. $2n = 40$.

Epiphytic on tree trunks in forests; below 2100 m. Hainan, S and SW Yunnan [Bhutan, NE India, Laos, Nepal, Thailand, Vietnam].

2. *Panisea cavaleriei* Schlechter, Repert. Spec. Nov. Regni Veg. 20: 383. 1924.

平卧曲唇兰 ping wo qu chun lan

Pseudobulbs connected to one another by many separate short rhizomes, prostrate below middle, upper part curved upward, narrowly oblong or ovate-oblong, 1–2 cm × 7–8 mm, apex 1-leaved. Leaf blade narrowly elliptic to elliptic, 2.6–5 × 1.2–1.6 cm, papery, apex acute or obtuse; petiole 6–12 cm. Inflorescence 1.5–2.5 cm; floral bracts ovate, very small, scarious. Flowers yellowish white; pedicel and ovary 1.2–1.8 cm, slender. Sepals subovate-lanceolate, 13–16(–20) × 5–6 mm, slightly dorsally carinate, 5-veined; lateral sepals oblique, base dilated. Petals shorter and narrower than sepals, thinly textured; lip obovate-oblong, 16–22 × 7–12 mm, narrowed into a claw from middle to base, concave or shallowly saccate at base, entire, upper margin often irregularly denticulate or ± crisped, apex subtruncate and apiculate, upper part with 2 short longitudinal lamellae; lamellae ca. 1.5 mm, ca. 1 mm high. Column 5–7 mm, winged; wings very narrow in lower part, upper part wider, 1.5–2 mm wide on one side, apex surrounding column and slightly 3-lobed and irregularly denticulate. Fl. Dec–Apr.

• Forests, lithophytic on shaded rocks along rivers; 1700–2100 m. SW Guangxi, SW Guizhou, C and SE Yunnan.

3. *Panisea uniflora* (Lindley) Lindley, Fol. Orchid. 5(Panisea): 2. 1854.

单花曲唇兰 dan hua qu chun lan

Coelogyne uniflora Lindley, Gen. Sp. Orchid. Pl. 42. 1830; *Chelonistele biflora* (E. C. Parish & H. G. Reichenbach) Pfitzer; *Coelogyne biflora* E. C. Parish & H. G. Reichenbach; *C. falcata* T. Anderson ex J. D. Hooker; *C. thuniana* H. G. Reichenbach; *Pleione thuniana* (H. G. Reichenbach) Kuntze; *P. uniflora* (Lindley) Kuntze.

Rhizome 3–4 mm in diam., rigid, densely covered with brown sheaths. Pseudobulbs tufted, borne 5–15 mm apart, often \pm appressed to rhizome, narrowly ovoid to flask-shaped, 1.5–4 cm \times 7–13 mm, base contracted, apex 2-leaved. Leaf blade linear-oblong, (5.5–)10–21.5 \times 0.8–1.2 cm, acuminate; petiole 1–2 cm. Inflorescence proteranthous or heteranthous, erect, 1-flowered; peduncle 2–4 cm, lower part enclosed in sheaths; floral bracts ovate, 4–6 mm, scarious. Flowers pale apricot to yellowish, lip with 3–7 orange spots on lateral lobes; pedicel and ovary 1.1–1.3 cm. Sepals narrowly ovate-oblong, 19–22 \times 5.5–6.5 mm, 5-veined, acuminate or acute. Petals oblong-elliptic or narrowly elliptic, 17–20 \times ca. 7 mm, 5-veined, obtuse; lip obovate-elliptic, 1.8–2.2 \times 1–1.2 cm, base contracted and shortly clawed, rounded, lower sides with 2 very small lateral lobes; lateral lobes oblong-lanceolate, sometimes slightly falcate, ca. 3 \times 1 mm, weakly saccate at base; disk with 2 or 3 obscure keels. Column curved, 8–10 mm, broadly winged; foot ca. 2 mm. Capsule obovoid to ellipsoid, 1.7–2.2 \times 1–1.2 cm. Fl. Oct–Mar. $2n = 40$.

Epiphytic on trees or lithophytic on rocks in forests; 800–2400 m. S Yunnan [Bhutan, Cambodia, NE India, Laos, Myanmar, Nepal, Thailand, Vietnam].

4. *Panisea yunnanensis* S. C. Chen & Z. H. Tsi, Acta Bot. Yunnan. 2: 301. 1980.

云南曲唇兰 yun nan qu chun lan

Rhizome 2–3 mm in diam., densely covered with brown sheaths. Pseudobulbs tufted, borne 3–6 mm apart, dark green to brown when dry, narrowly ovoid to ovoid, 1.2–2 cm \times 4–7 mm, thinly wrinkled, base conspicuously contracted, apex 2-leaved. Leaf blade narrowly oblong or oblong-lanceolate, 25–45 \times 4–8 mm, papery, acute or obtuse; petiole 2–4 mm. Inflorescence 2–3 cm, 1- or 2-flowered, base embraced by several scarious sheaths; floral bracts ovate, 3–4 mm, scarious. Flowers white; pedicel and ovary 1.2–1.4 cm. Dorsal sepal narrowly ovate, 11–14 \times 3.5–4.5 mm, 5-veined, acuminate; lateral sepals oblong-lanceolate, 11–14 \times 2–2.5 mm, dorsally carinate, 3-veined. Petals similar to lateral sepals, but not carinate; lip oblong-spatulate, 11–14 \times 3–4 mm, sometimes with slightly thickened veins, attenuate toward base, clawed at base, entire, margin slightly crisped, apex rounded, without lamellae and other appendages. Column 5–7 mm, winged. Fl. Nov–Dec.

Epiphytic on trees or lithophytic on rocks in forests; 1200–1800 m. SE Yunnan [N Vietnam].

5. *Panisea demissa* (D. Don) Pfitzer in Engler, Pflanzenr. 32(IV. 50. II. B. 7): 141. 1907.

矮曲唇兰 ai qu chun lan

Dendrobium demissum D. Don, Prodr. Fl. Nepal. 34. 1825; *Coelogyne parviflora* Lindley; *Panisea parviflora* (Lindley) Lindley.

Pseudobulbs clustered, narrowly ovoid to ovoid, 1.5–4 \times ca. 0.6 cm. Leaves 1 or 2; blade lanceolate or elliptic-lanceolate, 3–8 \times 0.7–1.5 cm, acute; petiole 4–8 mm. Inflorescence proteranthous, decurved, laxly 5–8-flowered; peduncle slender, sheathed at base, 1–2 cm; rachis 2–3.5 cm; floral bracts ovate, 6–7 \times 1–1.8 mm, acute, membranous, persistent. Flowers 1–1.2 cm in diam., white; pedicel and ovary slender, 6–9 mm. Sepals similar, oblong-lanceolate, weakly saccate at base, dorsally keeled, 8–12 \times ca. 3 mm. Lip simple, oblong, 8–12 \times ca. 2 mm, subacute, sigmoidally bent, 3-veined, narrow at base, ecallose. Column winged, ca. 8 mm. Fl. Apr.

Epiphytic on trees. SC China (without precise locality) [NE India, Laos, Myanmar, Nepal, Thailand, Vietnam].

