

84. CREMASTRA Lindley, Gen. Sp. Orchid. Pl. 172. 1833.

杜鹃兰属 du juan lan shu

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

Herbs, terrestrial. Pseudobulbs cormlike, ovoid or cylindrical, noded, with many fibrous, elongate roots at base and a coraloid rhizome beneath. Leaves 1 or 2, or rarely plants leafless (in which case holomycotrophic), arising directly from apex of pseudobulb, green, sometimes blotched with purple, narrowly ovate to narrowly elliptic, plicate, gradually contracted at base into a long petiole-like stalk, glabrous, apex acute. Inflorescence arising directly from apex of pseudobulb, erect, rather long, racemose, with 2 or 3 tubular sheaths below middle, glabrous; rachis subdensely to densely few or many flowered; floral bracts narrowly elliptic to lanceolate, small, apex acute. Flowers resupinate, ascending or pendulous, narrowly tubular; pedicel and ovary usually arcuate, elongate, slender. Sepals and petals subsimilar, free, spreading or not, narrowly elliptic to linear, tapering gradually toward base; lip narrowly oblong-obovate, elongate, 3-lobed above middle, lateral margins involute, base shallowly saccate, not spurred; lateral lobes linear or narrowly oblong; mid-lobe oblong or obovate, with a fleshy callus at base. Column elongate, slightly dilated toward apex, with or without a pair of ventral wings; anther terminal, incumbent; pollinia 4, in 2 pairs, slightly laterally compressed, waxy, attached to a viscidium.

Four species: from Nepal, NE India, and Bhutan, through S and E China, to N Thailand, Vietnam, and Japan; three species (one endemic) in China.

- 1a. Leaves 2, deep green, blotched with purple; flowers suberect, opening widely; lip 13–18 mm, mid-lobe strongly deflexed 3. *C. unguiculata*
- 1b. Leaf usually solitary, rarely 2, green, lacking purple blotches; flowers pendulous, not opening widely; lip 20–34 mm, mid-lobe straight.
 - 2a. Pseudobulbs cormlike, ovoid or subglobose, 1.5–3 cm; callus of lip positioned at base of mid-lobe, elongate, wrinkled to verruculose 1. *C. appendiculata*
 - 2b. Pseudobulbs broadly cylindrical, 10–14 cm; callus of lip positioned midway along mid-lobe, subglobose, smooth 2. *C. guizhouensis*

1. *Cremastra appendiculata* (D. Don) Makino, Bot. Mag. (Tokyo) 18: 24. 1904.

杜鹃兰 du juan lan

Plants 20–70 cm tall. Pseudobulb ovoid or subglobose, 1.5–3 × 1–3 cm, few noded. Leaf 1 or rarely 2, narrowly elliptic to narrowly oblanceolate-elliptic, 18–34 × 4–8 cm, mainly 3-veined, base subcuneate, apex acute or acuminate; petiole-like base 7–17 cm. Inflorescence 25–70 cm; rachis (5–)10–25 cm, subdensely to densely 5–22-flowered; floral bracts lanceolate to ovate-lanceolate, (3–)5–10 mm. Flowers fragrant, pendulous, not opening widely, pale purple to orange-brown, narrowly campanulate, petals and lip with darker spots; pedicel and ovary (3–)5–15 mm. Sepals narrowly oblanceolate-spatulate, 20–34 × 2–5 mm, apex acute or acuminate; lateral sepals slightly oblique. Petals narrowly oblanceolate, 18–32 × 1.5–3.5 mm, apex acuminate; lip linear, 20–34 × 2–3.5 mm (though wider across lobes at apex), saccate at base, 3-lobed at apex; lateral lobes linear to narrowly oblong, 4–6 × ca. 1 mm, apex obtuse; mid-lobe ovate to narrowly oblong, 6–8 × 3–5 mm, apex acute or obtuse; disk with a fleshy callus at base of mid-lobe; callus variable in shape and size, 1–5 mm, sparingly wrinkled or verruculose. Column 18–26 mm, slender, slightly dilated at apex, with or without narrow ventral wings below anther; anther 1–3 mm. Capsule pendulous, ellipsoid, 25–30 × 8–13 mm. Fl. May–Jun, fr. Sep–Dec. $2n = 24, 42, 48, 52$.

Wet places in forests, along valleys; 400–2900 m. Anhui, Chongqing, S Gansu, N Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, S Shanxi, Sichuan, Taiwan, Xizang, SE Yunnan, Zhejiang [Bhutan, India, Japan, Korea, Nepal, Thailand, Vietnam].

- 1a. Callus on lip clavate, 4–5 mm, verruculose; column wings absent 1a. var. *appendiculata*
- 1b. Callus on lip linear, 1–2 mm, wrinkled; column with narrow ventral wings 1b. var. *variabilis*

1a. *Cremastra appendiculata* var. *appendiculata*

杜鹃兰(原变种) du juan lan (yuan bian zhong)

Cymbidium appendiculatum D. Don, Prodr. Fl. Nepal. 36. 1825; *Cremastra appendiculata* var. *triloba* (Hayata) S. S. Ying; *C. bifolia* C. L. Tso; *C. triloba* Hayata; *C. wallichiana* Lindley.

Plants 25–60 cm tall. Callus on lip clavate, 4–5 mm, verruculose. Column wings absent.

Forests; 1000–2900 m. Taiwan, Xizang, SE Yunnan [Bhutan, India, Nepal].

1b. *Cremastra appendiculata* var. *variabilis* (Blume) I. D. Lund, Nordic J. Bot. 8: 201. 1988.

翅柱杜鹃兰 chi zhu du juan lan

Hyacinthorchis variabilis Blume, Mus. Bot. 1: 48. 1849; *Cremastra appendiculata* var. *viridiflora* (Honda) Averyanov; *C. lanceolata* (Kraenzlin) Schlechter; *C. mitrata* A. Gray; *C. variabilis* (Blume) Nakai; *C. variabilis* var. *viridiflora* Honda; *Pogonia lanceolata* Kraenzlin.

Plants 20–70 cm tall. Callus on lip linear, 1–2 mm, wrinkled. Column with narrow ventral wings.

Forests; 400–2000 m. Anhui, Chongqing, S Gansu, N Guangdong,

Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, S Shanxi, Sichuan, Zhejiang [Japan, Korea, Thailand, N Vietnam].

2. *Cremastra guizhouensis* Q. H. Chen & S. C. Chen, *Acta Phytotax. Sin.* 41: 264. 2003.

贵州杜鹃兰 *gui zhou du juan lan*

Plants 60–70 cm tall. Pseudobulb cylindric, 10–14 × 1.3–1.5 cm, thick, 4- or 5-noded. Leaf 1 or rarely 2, oblong-elliptic or narrowly elliptic-lanceolate, 18–31 × 3.5–9 cm, base cuneate, apex long acuminate; petiole-like base 6–8 cm. Inflorescence ca. 54 cm; rachis ca. 18 cm, densely 10–28-flowered; floral bracts linear-lanceolate, 10–15 mm. Flowers ± pendulous, not opening widely, yellow, narrowly campanulate; pedicel and ovary 7–10 mm. Sepals narrowly oblanceolate, 28–30 × 2–3.5 mm, apex acute or acuminate; lateral sepals slightly oblique. Petals narrowly oblanceolate to linear-oblanceolate, 25–28 × 2–3.5 mm, apex acuminate; lip linear-obovate, 25–28 × 2.5–4 mm (though wider across lobes at apex), 3-lobed near apex; lateral lobes linear to linear-oblong, 4–5 × 1–1.5 mm, apex acute to obtuse; mid-lobe obovate or rhombic-obovate, 6–8 × 3–5 mm, margin ± undulate, apex obtuse; disk with a fleshy callus midway along mid-lobe; callus subglobose, ca. 1.5 mm, smooth. Column 25–28 mm, slender, slightly dilated at apex. Fl. May–Jun.

- Forest margins; 1300–1400 m. S Guizhou.

3. *Cremastra unguiculata* (Finet) Finet, *Bull. Soc. Bot. France* 44: 235. 1897.

斑叶杜鹃兰 *ban ye du juan lan*

Oreorchis unguiculata Finet, *Bull. Soc. Bot. France* 43: 698. 1897; *Aplectrum unguiculatum* (Finet) F. Maekawa.

Plants 20–40 cm tall. Pseudobulbs ovoid or subglobose, ca. 1.5 cm in diam., 3- or 4-noded. Leaves 2, deep green and usually blotched with purple, narrowly elliptic, 10–15 × 2–3 cm, base cuneate, apex acuminate or acute; petiole-like base 2.5–6 cm. Inflorescence erect, to 30 cm, slender; rachis 10–13 cm, laxly 7–9-flowered; floral bracts ovate-lanceolate, 4–5 mm. Flowers suberect, opening widely, outer surface purplish brown, inner surfaces green, spotted with purplish brown, lip white; pedicel and ovary 9–13 mm. Sepals linear-oblanceolate or narrowly oblanceolate, 17–22 × ca. 2.5 mm, apex acute; lateral sepals slightly oblique. Petals narrowly oblanceolate, 15–20 × 1–1.5 mm, apex acute; lip narrowly spatulate, 13–18 × ca. 2.5 mm (though wider across lobes), 3-lobed above middle; lateral lobes linear, 1–1.5 mm, apex acute or obtuse; mid-lobe strongly deflexed, obovate, 5–6 × 2.5–3.5 mm, margin crisped and irregularly dentate-incised, apex obtuse; disk with a fleshy callus near base of mid-lobe; callus pulvinate, ca. 2 mm. Column 12–13 mm, slender. Fl. May–Jun. $2n = 50$.

- Mixed forests; 900–1000 m. Jiangxi [Japan, Korea].

