

22. CORYBAS Salisbury, Parad. Lond. ad t. 83. 1807.

铠兰属 kai lan shu

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

Calcearia Blume; *Corysanthes* R. Brown; *Nematoceras* J. D. Hooker.

Herbs, terrestrial or rarely epiphytic, small. Tuber solitary, globose to ovoid; subterranean stem and roots slender, fleshy, pubescent. Stem slender, erect, sometimes short and remaining subterranean, usually angled or winged, with a membranous tubular cataphyll at base. Leaf solitary (rarely 2), cordate or broadly ovate, entire or rarely 3- or 5-lobed, sessile or with a short petiole-like base, often appressed to ground, with 1–3 main veins, venation usually white or red. Floral bracts 1 or 2. Flower terminal, solitary, nearly sessile, resupinate, held ± erect at leaf base; ovary usually 6-ridged. Dorsal sepal hoodlike and curved over lip, basal margin incurved and forming a tube that embraces base of lip; lateral sepals and petals linear, narrow, free or connate at base; lip deeply channeled at base and forming a decurved tube with dorsal sepal, upper limb enlarged, spreading or reflexed, adaxially usually minutely papillose or hairy, with 2 spurs or auricles (rarely neither) at base. Column short; anther terminal, erect, 2-locular; pollinia 4 or 2 with cleft, granular-farinaceous, without caudicles, directly attached to sticky viscidium; rostellum dorsal; stigma entire, concave. Capsule strongly 6-ridged, borne on elongate pedicel.

About 100 species: mainly in New Guinea, Australia, and the Pacific islands, extending through SE Asia to the Himalayas; five species (four endemic) in China.

1a. Petals 12–30 mm.

2a. Dorsal sepal apex long apiculate; lateral sepals free 4. *C. sinii*

2b. Dorsal sepal apex rounded; lateral sepals connate at base 5. *C. himalaicus*

1b. Petals 8.5–10 mm.

3a. Lip without callus at base; floral bracts conspicuously longer than ovary 1. *C. taiwanensis*

3b. Lip with a large callus at base; floral bracts slightly longer to shorter than ovary.

4a. Lip with a suborbicular lamella; floral bracts slightly longer than pedicel and ovary 2. *C. taliensis*

4b. Lip without a lamella; floral bracts nearly equal to or slightly shorter than pedicel and ovary 3. *C. fanjingshanensis*

1. *Corybas taiwanensis* T. P. Lin & S. Y. Leu, *Taiwania* 20: 162. 1975.

台湾铠兰 tai wan kai lan

Calcearia taiwanensis (T. P. Lin & S. Y. Leu) M. A. Clements & D. L. Jones.

Plants small, 3–5 cm tall. Tuber subglobose or ovoid, 3–4 × ca. 3 mm; subterranean stem erect, pilose. Stem erect, glabrous, with 1 short cataphyll at basal node. Leaf solitary, near apex of stem, sessile, cordate, ca. 1.5 × 1.6 cm, with reticulate venation, apex acute. Floral bract lanceolate, ca. 5 mm. Flower solitary, pale purplish red, subsessile; ovary ca. 3 mm. Dorsal sepal incurved, linear, entire, ca. 13 × 2 mm, apex obtuse; lateral sepals narrowly linear, ca. 13 mm, connate at base for up to 3 mm. Petals narrowly linear, ca. 10 mm; lip orbicular-elliptic when expanded, ca. 17 × 10 mm, base tubular, apical margin fimbriate; disk with several dark red stripes but lacking calli and lamellae; spurs 2, hornlike, ca. 3 mm. Column broadly elliptic, ca. 3.5 mm; pollinia 4, in 2 pairs, ca. 1.2 mm; viscidium elliptic, large; stigma protruding, cupular. Fl. Aug.

• Mossy cliffs, rocky outcrops in forests; ca. 1400 m. N Taiwan.

2. *Corybas taliensis* Tang & F. T. Wang, *Acta Phytotax. Sin.* 1: 185. 1951.

大理铠兰 da li kai lan

Calcearia taliensis (Tang & F. T. Wang) M. A. Clements & D. L. Jones.

Plants small, 5–6.5 cm tall. Tuber subglobose, ca. 5 mm in

diam.; subterranean stem erect, pilose. Stem erect, slender, with 1 short cataphyll at basal node. Leaf solitary, near apex of stem, sessile, cordate to broadly ovate, 8.5–14 × 8–10.5 mm, adaxially with pale reticulate venation, base amplexicaul, apex shortly acuminate. Floral bract linear-lanceolate, slightly longer than ovary. Flower solitary, purplish. Dorsal sepal erect, spatulate, hoodlike, ca. 14 × 7 mm, 5–7-veined, apex rounded, apiculate; lateral sepals similar to petals, narrowly linear or subulate, ca. 8.5 × 1.5 mm, 1-veined; lip subobovoid when expanded, ca. 10 × 8 mm, base tubular and erect, apex recurved; disk with 1 suborbicular, slightly fleshy lamella and 1 large callus at base; spurs 2, hornlike, ca. 3.5 mm. Column ca. 2.5 mm. Fl. Sep.

• Forests; 2100–2500 m. W Sichuan, W Yunnan.

3. *Corybas fanjingshanensis* Y. X. Xiong, *Acta Phytotax. Sin.* 45: 809. 2007.

梵净山铠兰 fan jing shan kai lan

Plants small, 3.5–6 cm tall. Tuber subglobose, 4–6 mm in diam.; subterranean stem erect. Stem erect, with 1 short cataphyll at basal node. Leaf solitary, near apex of stem, cordate or broadly ovate, 9–14 × 7–9.5 cm, adaxially with white reticulate venation, base amplexicaul, apex shortly acuminate. Floral bract lanceolate, nearly equal to or slightly shorter than pedicel and ovary. Flower solitary, rosy or pink, longitudinally striped with purple. Dorsal sepal erect, spatulate, hoodlike, 10–12 × 5–8 mm, 7–9-veined, apex rounded; lateral sepals narrowly linear or subulate, 5–5.5 × 0.5–0.8 mm, 1-veined. Petals similar to lateral sepals, 6–7 × 0.5–1 mm; lip subobovate when expanded, 11–15 × 6–10 mm, base tubular, apical half recurved; disk with a cal-

lus at base; spurs 2, ca. 3 mm. Column ca. 2 mm. Fl. Jun–Jul.

- Mossy places; 2100–2400 m. NE Guizhou.

4. *Corybas sinii* Tang & F. T. Wang, Acta Phytotax. Sin. 1: 186. 1951.

铠兰 kai lan

Calcearia sinii (Tang & F. T. Wang) M. A. Clements & D. L. Jones.

Plants small, to 4 cm tall. Tuber ovoid to ellipsoid, 3.5–6 × 3.5–4 mm; subterranean stem erect, with long curved soft hairs. Stem puberulent, with 1 short cataphyll at basal node. Leaf solitary, near apex of stem, sessile, broadly ovate, 9–18 × 8–16.5 mm, with reticulate venation, base cordate, amplexicaul, margin shallowly undulate, apex long acuminate. Floral bract subulate, ca. 1.5 × as long as ovary. Flower solitary, deep purple; ovary ca. 3 mm. Dorsal sepal oblanceolate, ca. 18.5 × 5 mm, 9-veined, apex rounded and long apiculate; lateral sepals free, subulate, ca. 14 × 1 mm. Petals similar to lateral sepals, to 25–30 mm, 1-veined; lip subobovoid when expanded, ca. 13 × 11 mm, 13-veined, basally tubular and erect, apical part recurved, margin erose, apex rounded; disk lacking a lamella but with 1 large callus at base; spurs 2, hornlike, ca. 5 mm. Column ca. 3.8 mm. Fl. Jun–Nov.

- Forests; 1500–2300 m. C and N Guangxi, C Taiwan.

5. *Corybas himalaicus* (King & Pantling) Schlechter, Repert. Spec. Nov. Regni Veg. 19: 19. 1923.

杉林溪铠兰 shan lin xi kai lan

Corysanthes himalaica King & Pantling, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65: 128. 1896; *Corybas purpureus* J. Joseph & Yoganarasimhan; *C. shanlinshiensis* W. M. Lin, T. C. Hsu & T. P. Lin.

Plants small, 3–6 cm tall. Tuber globose to ellipsoid, ca. 4 mm, minutely pilose; subterranean stem erect, 0.5–3 cm, pilose. Stem erect, to 5 cm, glabrous, with a tubular cataphyll at basal node. Leaf solitary, near apex of stem, cordate, 0.8–2.2 × 0.7–2.3 cm, adaxially with palmate venation, base amplexicaul, apex cuspidate. Floral bract linear-lanceolate, 6–12 × ca. 2 mm. Flower solitary, white and purplish red; pedicel and ovary 4–5 mm. Dorsal sepal spatulate, 12–17 × 4–8 mm, apex rounded; lateral sepals filiform, 11–14 mm, connate at base for ca. 1/5 of length. Petals similar to lateral sepals, 12–20 mm; lip orbicular and 8–14 mm wide when expanded, slightly shorter than petals,

base tubular, apical part recurved; disk papillose, marked with parallel violet-red lines, with a conspicuous callus at base; spurs 2, whitish, straight or slightly arcuate, 3–7 mm. Column ca. 2.5 mm. Fl. Jul–Aug.

Mossy rocky places in forests; 1700–1900 m. C Taiwan [Bhutan, NE India].

