

13. CORALLODISCUS Batalin, Trudy Imp. S.-Peterburgsk. Bot. Sada 12: 176. 1892.

珊瑚苣苔属 shan hu ju tai shu

Herbs, perennial, epipetric, rhizomatous, stemless. Leaves many, basal; leaf blade glabrous to densely woolly, base narrowly to broadly cuneate, rarely subrounded. Inflorescences lax or dense, axillary, rarely subumbel-like, 1- to many-flowered cymes; bracts apparently absent. Calyx actinomorphic, 5-sect from near base to 5-lobed from near middle; segments equal. Corolla blue to purple, seldom yellow to white, zygomorphic, inside densely bearded on abaxial lip; tube tubular, not swollen, much longer than limb, 1–7 mm in diam.; limb 2-lipped; adaxial lip 2-lobed, usually distinctly shorter than abaxial lip; abaxial lip 3-lobed, lobes subequal, rarely unequal, apex rounded to obtuse. Stamens 4, adnate to corolla tube above base or rarely above middle, included or rarely slightly exerted; anthers dorsifixed, coherent in pairs, thecae divaricate, confluent, dehiscing longitudinally; connective not projecting; staminode 1, adnate to adaxial side of corolla tube. Disc ringlike. Ovary oblong, 1-loculed; placentas 2, parietal, projecting inward, 2-cleft. Stigma 1, terminal, capitate, emarginate. Capsule straight in relation to pedicel, narrowly oblong to linear, rarely ovoid, much longer than calyx, dehiscing loculicidally or sometimes septically to base; valves 2, straight, not twisted. Seeds unappendaged.

Three to five species: Bhutan, China, N India, Nepal, Sikkim, Thailand; three species in China.

- 1a. Cymes 1-flowered; leaf blade abaxially densely white to grayish woolly; peduncle 1–6 cm; capsule ovoid 3. *C. conchifolius*
- 1b. Cymes (1–)4–15(–30)-flowered, if 1-flowered, then leaf blade abaxially only along veins rust-brown woolly; peduncle (1–)3–17 cm; capsule ovoid to narrowly linear, if ovoid, then leaf blade abaxially densely rust-brown woolly.
 - 2a. Capsule ovoid to oblong, rarely narrowly oblong; leaf blade rhombic-lanceolate to lanceolate, rarely ovate, 1.6–11 × 0.8–4 cm, adaxially glabrous, rarely rust-brown woolly near base of midrib; peduncle densely rust-brown woolly 1. *C. kingianus*
 - 2b. Capsule narrowly oblong; leaf blade broadly obovate to elliptic, rhombic, ovate, flabellate, or oblong, (0.5–)1–5(–8) × (0.4–)0.8–3(–3.7) cm, adaxially glabrous to densely villous; peduncle glabrescent to brownish woolly, glabrescent 2. *C. lanuginosus*

1. *Corallodiscus kingianus* (Craib) B. L. Burt, Gard. Chron., ser. 3, 122: 212. 1947.

卷丝苣苔 juan si ju tai

Didissandra kingiana Craib, Notes Roy. Bot. Gard. Edinburgh 11: 259. 1919; *Corallodiscus grandis* (Craib) B. L. Burt; *D. grandis* Craib; *D. rufa* King ex J. D. Hooker, not C. B. Clarke.

Petiole to 5.5 cm, adaxially glabrous, rarely rust brown centrally, abaxially densely rust-brown woolly; leaf blade rhombic-lanceolate to lanceolate, rarely ovate, 1.6–11 × 0.8–4 cm, flat to bullate, adaxially glabrous, rarely rust-brown woolly near base of midrib, abaxially densely rust-brown woolly, margin subentire to crenulate, rarely serrulate, apex narrowly acute to acute, seldom obtuse or acuminate; lateral veins 4 or 5 on each side of midrib, adaxially impressed, abaxially prominent. Cymes (5–)7–20-flowered; peduncle (3.5–)4.5–17 cm, densely rust-brown woolly. Calyx 4–5 mm, outside densely rust-brown woolly. Corolla purplish to blue and white, inside with 2 deep brown spotted striae on abaxial lip, (1–)1.3–16 (–1.8) cm, outside glabrous; tube 8–12 × 3–7 mm; adaxial lip lobes 1–3 mm; lobes abaxial lip 3–5 mm. Adaxial stamens 3–4 mm, abaxial ones 5–6 mm; staminode ca. 1.5 mm. Pistil glabrous;

ovary ca. 3 mm. Style 3–6 mm. Capsule ovoid to oblong, rarely narrowly oblong, 6–10(–20) mm. Fl. Jun–Sep, fr. Jun–Sep.

Rocks on slopes or in forests; 2800–4800 m. S Qinghai, SW Sichuan, S Xizang, NW Yunnan [Bhutan, Sikkim].

Corallodiscus kingianus and *C. grandis* are treated as a single species because the large number of specimens now available shows that the variation between them is continuous and correlates with elevation throughout their range. Corolla and pedicel length and number of flowers per inflorescence tend to decrease with increasing elevation. Calyx indumentum becomes denser with greater elevation.

2. *Corallodiscus lanuginosus* (Wallich ex R. Brown) B. L. Burt, Gard. Chron., ser. 3, 122: 212. 1947.

西藏珊瑚苣苔 xi zang shan hu ju tai

Didymocarpus lanuginosus Wallich ex R. Brown, On Cyrtandreae 118. 1839; *Corallodiscus bullatus* (Craib) B. L. Burt; *C. cordatulus* (Craib) B. L. Burt; *C. flabellatus* (Craib) B. L. Burt; *C. flabellatus* var. *leiocalyx* W. T. Wang; *C. flabellatus* var. *luteus* (Craib) K. Y. Pan; *C. flabellatus* var. *puberulus* K. Y. Pan; *C. flabellatus* var. *sericeus* (Craib) K. Y. Pan; *C. labordei* (Craib) B. L. Burt; *C. lineatus* (Craib) B. L. Burt; *C. luteus* (Craib) B. L. Burt; *C. mengtzeanus* (Craib) B. L. Burt; *C. patens* (Craib) B. L. Burt; *C. plicatus*

(Franchet) B. L. Burtt; *C. plicatus* var. *lineatus* (Craib) K. Y. Pan; *C. sericeus* (Craib) B. L. Burtt; *C. taliensis* (Craib) B. L. Burtt; *Didissandra bullata* Craib; *D. cordatula* Craib; *D. flabellata* Craib; *D. labordei* Craib; *D. lanuginosa* (Wallich ex R. Brown) C. B. Clarke; *D. lineata* Craib; *D. lutea* Craib; *D. mengtzeana* Craib; *D. patens* Craib; *D. plicata* Franchet; *D. sericea* Craib; *D. taliensis* Craib; *D. taliensis* f. *robusta* Craib.

Petiole to 4(–5.5) cm, adaxially glabrous to woolly, abaxially gray to brownish woolly to pannose; leaf blade broadly obovate to elliptic, rhombic, ovate, flabellate, or oblong, (0.5–) 1–5(–8) × (0.4–)0.8–3(–3.7) cm, flat to plicate or bullate, adaxially glabrous to densely villous, abaxially brownish pubescent to white to brownish woolly or puberulent to glabrous, margin subentire to crenulate, denticulate, or serrate, apex acute to rounded; lateral veins 3–5(or 6) on each side of midrib, adaxially flat to impressed, abaxially prominent to strongly prominent. Cymes (1–)4–15(–30)-flowered; peduncle (1–)3–17 cm, glabrescent to brownish woolly, glabrescent. Calyx 1.5–3.5 mm, outside glabrous to pubescent, rarely woolly. Corolla blue or purple to white or yellow, inside with or without spots on abaxial lip, (0.6–)0.8–1.4(–1.9) cm, outside glabrous to glabrescent; tube 5.5–10(–13) × 1.5–5.5 mm; adaxial lip lobes 0.6–2 mm; abaxial lip lobes 2–4(–6) mm. Stamens 2–6.5 mm; staminode 0.5–2.2 mm. Pistil glabrous; ovary 2–5 mm. Style 2–8 mm. Capsule narrowly oblong, 0.6–2.5 cm. Fl. Apr–Oct, fr. Jun–Dec.

Rocky slopes, steep cliffs, forest margins, forests; 700–4300 m. N Guangdong, N Guangxi, Guizhou, Hebei, Henan, Hubei, NW Hunan, Shaanxi, Shanxi, Sichuan, Xizang, Yunnan [Bhutan, N India, Nepal, Sikkim, Thailand].

As presently delimited, *Corallodiscus lanuginosus* includes seven taxa recognized in FRPS (Fl. Reipubl. Popularis Sin. 69: 233–245. 1990). Morphological variation in the present delimitation of *C. lanuginosus* includes indumentum (amount and type), leaf blade shape, size, margin, and texture, and flower number and size. The extent of this variation accounts for more than a few taxa previously described. However, in reexamining of all of these taxa, it became clear that the variation in all of these characters is continuous and is not correlated with the variation in other characters. For this reason it was impossible to clearly delimit previously recognized taxa. Thus, we recognize one, highly variable species, but further studies are needed to understand the variation.

The specimens from Xizang (Gyirong, Nyalam) and W Yunnan (Baoshan) differ from those of other areas in having the leaves entire or subentire, ovate or rarely obovate, flat or very rarely slightly plicate, submembranous or thin papery, and glabrous or nearly so adaxially. They probably represent a subspecies of *Corallodiscus lanuginosus* or an independent species.

3. *Corallodiscus conchifolius* Batalin, Trudy Imp. S. Peterburgsk. Bot. Sada 12: 176. 1892.

小石花 xiao shi hua

Corallodiscus forrestii (Anthony) B. L. Burtt;
Didissandra forrestii J. Anthony.

Petiole to 5 mm, adaxially glabrescent, abaxially white to grayish pubescent; leaf blade obovate to rhombic-ovate, elliptic, or suborbicular, 6–12 × 3–8 mm, flat to

plicate, adaxially glabrescent, abaxially densely white to grayish woolly, margin subentire to crenate, apex acute to rounded; basal venation palmate, veins 3–7; lateral veins to 4 on each side of midrib, adaxially impressed, abaxially prominent. Cymes 1-flowered; peduncle 1–6 cm, densely grayish pubescent to glabrescent. Calyx 2–5 mm, outside grayish woolly. Corolla purple-blue to pale or deep blue, 6.5–12 mm, outside sparsely puberulent; tube 5–9 × 1–3.2 mm; adaxial lip lobes 1–2 mm; abaxial lip lobes 1.5–3 mm. Adaxial stamens ca. 2 mm, abaxial ones 4–5 mm; staminode 0.4–1 mm. Pistil glabrous; ovary ca. 3 mm. Style 3–4 mm. Capsule ovoid, 6–7 mm. Fl. Jun–Sep, fr. Jul–Sep.

• Crevices of rocks or near roads in montane regions; 2100–3300 m. S Gansu, NW Sichuan, SE Xizang (Zayü Xian), NW Yunnan.

