

49. RHYNCHOTECHUM Blume, Bijdr. 775. 1826.

线柱苣苔属 xian zhu ju tai shu

Chiliandra Griffith.

Shrubs small, terrestrial, not rhizomatous. Stems branched or simple. Leaves usually few, along stem, opposite, seldom alternate, equal to subequal in a pair; leaf blade surfaces sericeous to hirsute or woolly, often glabrescent, base attenuate to rounded. Inflorescences lax, axillary, (few)- to many-flowered cymes; bracts 2, opposite. Calyx actinomorphic, 5-sect from base; segments equal. Corolla white to reddish or purple, zygomorphic, inside glabrous; tube campanulate tubular, not swollen, shorter than limb, 1–2 mm in diam.; limb indistinctly 2-lipped; adaxial lip 2-lobed, shorter than to equalling abaxial lip; abaxial lip 3-lobed, lobes equal or subequal, apex rounded to obtuse. Stamens 4, adnate to corolla tube near base or rarely near middle, included; anthers basifixed, free, thecae parallel, confluent at apex, dehiscing longitudinally; connective not projecting; staminode absent or 1, adnate to adaxial side of corolla tube. Disc ringlike or absent. Ovary ovoid, 1-loculed; placentas 2, parietal, projecting inward, 2-cleft. Stigma 1, terminal, depressed globose, undivided. Berry ovoid to globose, slightly longer than calyx, indehiscent. Seeds unappendaged.

About 13 species: SE Asia, Pacific Islands; five species in China.

- 1a. Stems, petiole, peduncle, and calyx outside densely spreading yellowish hirsute; peduncle 0.8–1.5(–2.4) cm 5. *R. vestitum*
- 1b. Stems, petiole, peduncle, and calyx outside brown or rusty pubescent to villous or woolly; peduncle (0.9–)2–6.5 cm.
 - 2a. Leaves alternate, or sometimes lower ones opposite; pedicel 1–4 mm; upper corolla lip ca. 3 mm 4. *R. discolor*
 - 2b. All leaves opposite; pedicel 2–16(–22) mm; upper corolla lip 1–2 mm.
 - 3a. Pistil and berry glabrous; cymes 15–70-flowered; bracts 3–13 mm; pistil 5–7 mm 1. *R. ellipticum*
 - 3b. Pistil and berry at least sparsely puberulent near base of style; cymes 5–30-flowered; bracts 3–8 mm; pistil 4–5.2 mm.
 - 4a. Corolla 4–5 mm; stamens adnate to corolla base; leaf blade (6.5–)13–30 × (2.5–)6.5–12 cm; peduncle rust-brown villous 2. *R. formosanum*
 - 4b. Corolla 3–3.5 mm; stamens adnate to corolla tube near middle, 0.8–1 mm above base; leaf blade 10–19 × 3.5–5.8 cm; peduncle brown pubescent 3. *R. longipes*

1. *Rhynchotechum ellipticum* (Wallich ex D. Dietrich) A. de Candolle, Prodr. 9: 285. 1845.

线柱苣苔 xian zhu ju tai

Corysanthera elliptica Wallich ex D. Dietrich, Syn. Pl. 3: 582. 1842; *Chiliandra obovata* Griffith;

Rhynchotechum latifolium J. D. Hooker & Thomson ex C. B. Clarke; *R. obovatum* (Griffith) B. L. Burt.

Stems 0.7–2 m, basally glabrescent, apically densely appressed rust-brown to brown woolly. Leaves opposite; petiole 0.8–5 cm, appressed rust-brown to brown woolly; leaf blade oblanceolate to obovate or elliptic, 9.5–32 × 3–10 cm, adaxially rust-brown to brown woolly, glabrescent, abaxially densely woolly to fulvous pubescent, glabrescent except along veins, base cuneate to attenuate, rarely nearly rounded, margin denticulate to serrate, apex acute to acuminate. Cymes 15–70-flowered; peduncle 0.9–4 cm, densely appressed rust-brown to brown woolly to pubescent; bracts 3–13 mm. Pedicel 2–13 mm. Calyx segments lanceolate, 2.2–5 mm, outside brown woolly to pubescent, inside glabrous. Corolla white or tinged pink, 3.5–6 mm; tube 1.5–2.5 mm; adaxial lip 1.6–1.8 mm; abaxial lip 2.2–4

mm. Stamens adnate to corolla near base, 0.5–1.1 mm; staminode 0.2–0.3 mm. Pistil 5–7 mm, glabrous; ovary 1–2 mm. Berry white, 2–6 mm, glabrous. Fl. Jun–Oct, fr. Aug–Jan.

Forests, shaded streamsides; 100–1800 m. S Fujian, Guangdong, Guangxi, SW Guizhou, Hainan, S Sichuan, SE Xizang, Yunnan [Bhutan, Cambodia, NE India, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

Rhynchotechum ellipticum and *R. formosanum* are very closely related, and all of the characters used to distinguish them intergrade. Weitzman and Skog believe that they represent a single species.

2. *Rhynchotechum formosanum* Hatusima, J. Jap. Bot. 15: 132. 1939.

冠萼线柱苣苔 guan e xian zhu ju tai

Lysimachia saurauifolia S. S. Ying; *Rhynchotechum ellipticum* (Wallich ex D. Dietrich) A. de Candolle var. *saurauifolium* (S. S. Ying) S. S. Ying.

Stems 0.3–2 m, apically densely appressed, rust-brown woolly. Leaves opposite; petiole 0.5–2.5 cm, densely appressed, rust-brown woolly; leaf blade usually elliptic to obovate, rarely ovate, (6.5–)13–30 × (2.5–)6.5–12 cm, densely rust-brown woolly, glabrescent, abaxially

veins remaining densely woolly, base cuneate to attenuate, rarely rounded, margin denticulate to serrate, apex abruptly acuminate to acute. Cymes 5–30-flowered; peduncle 1.2–3(–5.7) cm, rust-brown villous; bracts 3–8 mm. Pedicel 3–9(–22) mm. Calyx segments lanceolate, 2–5 mm, outside rust-brown villous, inside glabrous. Corolla white to red or purple, 4–5 mm; tube ca. 2 mm; adaxial lip ca. 1 mm; abaxial lip ca. 2 mm. Stamens adnate to corolla base, ca. 1.4 mm; staminode ca. 0.2 mm. Pistil ca. 4 mm, puberulent at least sparsely near style base; ovary ca. 1 mm. Berry white to greenish, 3–4 mm, puberulent, at least sparsely. Fl. May–Sep, Jan, fr. Jul–Mar.

Dense forests, shaded streamsides, rocky areas in valleys; 200–1500 m. S Guangdong, SW Guangxi, S Guizhou, Hainan, Taiwan, SE Yunnan [N Thailand].

Cyrtandra hillii H. Léveillé (1911) is probably conspecific with *Rhynchochotum formosanum*, but the combination in *Rhynchochotum* has never been made.

3. *Rhynchochotum longipes* W. T. Wang, *Guihaia* 4: 187. 1984.

长梗线柱苣苔 *chang geng xian zhu ju tai*
Stems ca. 35 cm, basally glabrescent, apically brown woolly. Leaves opposite; petiole 0.5–3 cm, brown woolly; leaf blade oblanceolate to obovate or elliptic, 10–19 × 3.5–5.8 cm, adaxially glabrescent, abaxially densely brown woolly, base attenuate, margin denticulate, apex acute to acuminate. Cymes 10–30-flowered; peduncle 3.5–6.5 cm, brown pubescent; bracts 6–7 mm. Pedicel 0.5–1.6 cm. Calyx segments narrowly lanceolate, 4.5–5.2 mm, outside densely appressed villous, inside glabrous. Corolla white, 3–3.5 mm; tube 1.3–1.8 mm; adaxial lip 1.5–2 mm; abaxial lip 2–3 mm. Stamens adnate to corolla tube near middle, 0.8–1 mm above base, ca. 1.2–1.5 mm; staminode 0.3–0.5 mm. Pistil 4–5.2 mm, puberulent; ovary 1–1.2 mm. Immature berry puberulent. Fl. Jul.

• S Guangxi (Ningming Xian, Shanglin Xian).

4. *Rhynchochotum discolor* (Maximowicz) B. L. Burtt, *Notes Roy. Bot. Gard. Edinburgh* 24: 37. 1962.

异色线柱苣苔 *yi se xian zhu ju tai*
Stems 15–60 cm, basally glabrescent, densely brown woolly. Leaves alternate or some opposite or nearly so; petiole 0.4–3.7 cm, densely appressed, brown woolly; leaf blade oblanceolate to obovate or elliptic, (4.5–)6.5–17 × (1.2–)2.5–6.5 cm, adaxially appressed villous, glabrescent, abaxially villous, glabrescent, woolly along veins, base sometimes oblique, attenuate, margin denticulate to serrulate or pinnately lobed to coarsely dentate, apex acute to acuminate. Cymes (5–)10–25-flowered; peduncle 1.8–6 cm, densely appressed brown woolly; bracts 5–10 mm. Pedicel 1–4 mm. Calyx segments linear to narrowly triangular, 4–6 mm, outside densely appressed woolly, inside villous near apex.

Corolla white, 4–5 mm; tube ca. 1 mm; adaxial lip ca. 3 mm; nearly equalling abaxial lip. Stamens adnate to corolla near base, ca. 2 mm; staminode ca. 0.5 mm. Pistil 3–3.5 mm, puberulent; ovary ca. 1.5 mm. Berry whitish to light brown, 5–8 mm, pilose basally, puberulent above, sometimes glabrescent. Fl. Feb–Sep, fr. Jul–Mar.

Shady areas in valley forests; near sea level to 1700 m. S Fujian, E Guangdong, Hainan, Taiwan [Japan, Philippines].

- 1a. Leaf blade margin denticulate to serrulate 4a. var. *discolor*
- 1b. Leaf blade margin pinnately lobed to coarsely dentate 4b. var. *incisum*

4a. *Rhynchochotum discolor* var. *discolor*

异色线柱苣苔(原变种) *yi se xian zhu ju tai (yuan bian zhong)*

Isanthera discolor Maximowicz, *Bull. Acad. Imp. Sci. Saint-Petersbourg* 19: 538. 1874.

Leaf blade margin denticulate to serrulate. Fl. Mar–Sep.

Shady areas in valley forests; near sea level to 1700 m. S Fujian, E Guangdong, Hainan, Taiwan [Japan, Philippines].

4b. *Rhynchochotum discolor* var. *incisum* (Ohwi) Walker, *J. Jap. Bot.* 46: 69. 1971.

羽裂异色线柱苣苔 *yu lie yi se xian zhu ju tai*
Isanthera discolor Maximowicz var. *incisa* Ohwi, *Acta Phytotax. Geobot.* 7: 29. 1938.

Leaf blade margin pinnatilobed to coarsely dentate. Fl. Feb.

Roadsides in montane regions. Taiwan (Pingdong Xian) [S Japan].

5. *Rhynchochotum vestitum* Wallich ex C. B. Clarke, *Commelyn. Cyrtandr. Bengal.* 132. 1874.

毛线柱苣苔 *mao xian zhu ju tai*
Stems (0.2–)1–2 m, basally glabrescent, creamy yellow hirsute. Leaves opposite; petiole (1–)2–4.5(–6.5) cm, densely spreading yellowish hirsute; leaf blade ovate to elliptic or obovate, 13–28.5 × 5.4–12 cm, sericeous to hirsute, persistent, base broadly cuneate to rounded, margin denticulate, apex acuminate to abruptly acuminate. Cymes (3–)5–15-flowered; peduncle 0.8–1.5(–2.4) cm, densely spreading yellowish hirsute; bracts 4–7 mm. Pedicel 4–13 mm. Calyx segments narrowly triangular to narrowly lanceolate, 4–5 mm, outside spreading hirsute, inside spreading hirsute near apex. Corolla reddish, ca. 6 mm; tube 1.5–2 mm; adaxial lip ca. 2.5 mm; abaxial lip ca. 4 mm. Stamens adnate to corolla near base, ca. 1.6 mm; staminode ca. 0.3 mm. Pistil ca. 5.5 mm, glandular; ovary ca. 1 mm. Berry white, 3–5 mm, glabrescent. Fl. Jun–Aug, fr. Oct–Nov.

Forests, shaded streamsides in valleys; 800–1300 m. W Guangxi, NE Xizang (Medog Xian), S Yunnan [Bhutan, Sikkim].

