

33. CHIRITOPSIS W. T. Wang, Bull. Bot. Res., Harbin 1(3): 21. 1981.
小花苣苔属 xiao hua ju tai shu

Herbs, perennial, epipetric or terrestrial, rhizomatous, stemless. Leaves few to many, basal; leaf blade puberulent to pilose, base cuneate to cordate. Inflorescences lax or rarely dense, axillary, few- to many-flowered cymes; bracts 2, opposite. Calyx actinomorphic, 5-sect from base; segments equal. Corolla white, yellowish, or purplish, zygomorphic, inside puberulent to glabrous; tube nearly tubular, not swollen, much longer than limb, 3–5 mm in diam.; limb indistinctly to distinctly 2-lipped; adaxial lip 2-lobed, slightly to 2–3 × shorter than abaxial lip; abaxial lip 3(or 4)-lobed, lobes equal or central lobe longer, apex rounded. Stamens 2, adnate to abaxial side of corolla tube near base or above middle, included; anthers dorsifixed, connate by adaxial surfaces, thecae divaricate, confluent at apex, dehiscing longitudinally; connective not projecting; staminodes (absent or) 1 or 3, adnate to adaxial or adaxial and abaxial sides of corolla tube. Disc ringlike or 2-lobed. Ovary ovoid, 1-loculed; placentas 2, parietal, projecting inward, 2-cleft. Stigma 1, abaxial, obtrapeziform, rarely linear, undivided to 2-lobed. Capsule straight in relation to pedicel, ovoid to narrowly ellipsoid, equalling to shorter than calyx, dehiscing loculicidally to base; valves 2, straight, not twisted. Seeds unappendaged.

• Nine species: endemic to China.

- 1a. Leaf blade margin pinnately to palmately lobed; staminodes 1 or 3, less often 2 or absent.
2a. Leaf blade ovate to rhombic, base broadly cuneate, margin pinnatifid 7. *C. bipinnatifida*
2b. Leaf blade ovate to orbicular or reniform, base cordate, margin palmately or nearly palmately lobed.
3a. Corolla ca. 7.8 mm; petiole, peduncle, pedicel, and calyx white puberulent to pilose; calyx segments 3–4 × 0.4–0.7 mm; stamens glabrous; disc 2-lobed, eglandular; staminode 1 8. *C. lobulata*
3b. Corolla 11–13 mm; petiole, peduncle, pedicel, and calyx glandular puberulent or pubescent and purple glandular; calyx segments 3–8 × 1.3–2 mm; stamens sparsely pubescent; disc ringlike, glandular; staminodes 2 or 3, seldom absent 9. *C. glandulosa*
- 1b. Leaf blade margin denticulate, dentate, crenate, or nearly entire; staminodes 2 or absent.
4a. Leaf blade orbicular-ovate to nearly orbicular; corolla purplish; stigma linear, 1–1.5 mm, undivided 1. *C. mollifolia*
4b. Leaf blade elliptic or rhombic to ovate or reniform, rarely nearly orbicular; corolla white or yellowish; stigma obtrapeziform, 0.3–0.9 mm, 2-lobed.
5a. Leaf blade base rounded to cordate; peduncle 5–9 cm; corolla 10–14 mm, inside puberulent in 2 longitudinal lines on or below abaxial lip; stamens puberulent or sparsely so.
6a. Leaf blade 4–8.5 × 3–9 cm, puberulent, margin repand-crenate to obtusely dentate; petiole 5.5–16.5 cm; bracts 2–3 × ca. 0.3 mm; pedicel 4–18 mm; corolla ca. 1.4 cm; stamens adnate to corolla ca. 3 mm above base, staminodes 2 5. *C. cordifolia*
6b. Leaf blade 3–4 × 2.2–3.6 cm, pubescent and pilose, margin remotely denticulate to entire; petiole 3–7 cm; bracts 5.5–7 × 1.8–2 mm; pedicel 1.5–3.5 mm; corolla ca. 1 cm; stamens adnate to corolla 1–1.5 mm above base, staminodes absent 6. *C. subulata*
- 5b. Leaf blade base cuneate to broadly cuneate, seldom to nearly cordate; peduncle 8–9 cm; corolla 7.2–12 mm, inside glabrous or sparsely puberulent below abaxial lip; stamens glabrous.
7a. Cymes dense; pedicels 0.2–2 mm; corolla distinctly 2-lipped, adaxial lip ca. 0.8 mm, abaxial lip ca. 2.2 mm, inside sparsely puberulent below abaxial lip; disc ringlike, ca. 0.5 mm; style ca. 2.8 mm, puberulent 4. *C. confertiflora*
7b. Cymes lax; pedicels 3–25 mm; corolla indistinctly 2-lipped, adaxial lip 2–3 mm, abaxial lip ca. 2 mm, inside glabrous; disc 2-lobed, 1–1.5 mm; style 5–7 mm, glabrous or nearly so.
8a. Leaf blade puberulent to villous, base cuneate to broadly cuneate; lateral veins conspicuous; pedicel 3–8 mm; corolla white, ca. 8 mm 2. *C. repanda*
8b. Leaf blade sparsely puberulent, base broadly cuneate to nearly cordate; lateral veins inconspicuous; pedicel 8–25 mm; corolla yellowish, ca. 12 mm 3. *C. xiuningensis*

1. *Chiritopsis mollifolia* D. Fang & W. T. Wang in W. T. Wang, *Guihaia* 6: 6. 1986.

密毛小花苣苔 *mi mao xiao hua ju tai*

Petiole 2.6–13.5 cm, densely spreading puberulent; leaf blade orbicular-ovate to nearly orbicular, 2–4.8 × 2–4.5 cm, very densely puberulent, base rounded to cordate, margin crenulate to obtusely dentate, apex obtuse to rounded; lateral veins inconspicuous. Cymes lax, 7–20-flowered; peduncle 4–8 cm, densely spreading puberulent; bracts linear, 3–5 × 0.5–1 mm, margin entire. Pedicel 1.5–8 mm, spreading densely puberulent. Calyx segments narrowly lanceolate-linear, ca. 3.5 × 0.7 mm, outside puberulent, inside sparsely puberulent near apex. Corolla purplish, 7.5–9 mm, inside glabrous; tube 5–6 mm; limb 2-lipped; adaxial lip ca. 2.2 mm; abaxial lip ca. 3 mm. Stamens adnate to corolla 0.4–0.6 mm above base, glabrous; filaments linear, 2–2.3 mm; staminodes 2, 0.5–1 mm. Disc ringlike, ca. 0.3 mm, glabrous. Pistil 7–8.5 mm, puberulent. Style 5.5–7 mm; stigma linear, 1–1.5 mm, apex undivided, truncate. Capsule narrowly ellipsoid, ca. 4 × 1.6 mm. Fl. Apr–Jun, fr. Jun.

• Shady cliffs in limestone hills; ca. 300 m. N Guangxi (Yishan Xian).

2. *Chiritopsis repanda* W. T. Wang, *Bull. Bot. Res.*, Harbin 1(3): 23. 1981.

小花苣苔 *xiao hua ju tai*

Petiole 3.5–11.6 cm, puberulent to villous; leaf blade elliptic to ovate, 3.5–9.5 × 2.5–4.2 cm, puberulent to villous, base cuneate to broadly souneate, margin sparsely repand-crenate to dentate, apex acute to rounded; lateral veins conspicuous. Cymes lax, 8–15-flowered; peduncle 3–14 cm, sparsely to densely pubescent or pilose; bracts lanceolate-linear to subulate, 4–10 × ca. 1 mm, margin entire. Pedicel 3–8 mm, sparsely to densely puberulent or pilose. Calyx segments narrowly triangular, 3–4 × ca. 1 mm, outside puberulent to pilose, inside glabrous. Corolla white, ca. 8 mm, inside glabrous; tube ca. 6 mm; limb indistinctly 2-lipped, both lips ca. 2 mm. Stamens adnate to corolla ca. 2 mm above base, glabrous; filaments subulate, ca. 3 mm; staminodes 2, ca. 1 mm. Disc 2-lobed, ca. 1 mm, glabrous. Pistil ca. 7.5 mm; ovary densely puberulent. Style ca. 5 mm, glabrous; stigma obtrapeziform, ca. 0.5 mm, 2-lobed. Capsule narrowly ovoid, ca. 4.5 × 1.5 mm. Fl. Jul–Sep, fr. Aug–Sep.

• Guangxi.

1a. Leaf blade base decurrent, cuneate 2a. var. *repanda*

1b. Leaf blade base oblique, broadly cuneate

..... 2b. var. *guilinensis*

2a. *Chiritopsis repanda* var. *repanda*

小花苣苔(原变种) *xiao hua ju tai* (yuan bian zhong)

Leaf blade base decurrent, cuneate. Fl. Jul–Sep, fr. Sep.

• NW Guangxi (Tian'e Xian).

2b. *Chiritopsis repanda* var. *guilinensis* W. T. Wang, *Guihaia* 12: 299. 1992.

桂林小花苣苔 *gui lin xiao hua ju tai*

Leaf blade base oblique, broadly cuneate. Fl. Aug, fr. Aug–Sep.

• Guangxi (Guilin Xian, Shanglin Xian).

3. *Chiritopsis xiuningensis* X. L. Liu & X. H. Guo, *Bull. Bot. Res.*, Harbin 9(3): 51. 1989.

休宁小花苣苔 *xiu ning xiao hua ju tai*

Petiole 1–8 cm, densely spreading puberulent; leaf blade ovate to broadly ovate or elliptic to nearly orbicular, 2–9 × 1–6 cm, sparsely puberulent, base broadly cuneate to nearly cordate, margin repand-denticulate to nearly entire, apex obtuse to rounded; lateral veins inconspicuous. Cymes lax, 2–10-flowered; peduncle 3–14 cm, spreading puberulent; bracts linear, 3–7 × 0.5–1 mm, margin entire. Pedicel 0.8–2.5 cm, spreading puberulent. Calyx segments linear to narrowly linear-lanceolate, 3–5 × 0.7–1 mm, outside puberulent, inside glabrous. Corolla yellowish, ca. 1.2 cm, inside glabrous; tube ca. 9 × 4 mm; limb indistinctly 2-lipped; adaxial lip ca. 3 mm; abaxial lip ca. 2 mm. Stamens adnate to corolla ca. 2.5 mm above base, glabrous; filaments lanceolate-subulate to narrowly subulate, ca. 3 mm; staminodes 2, ca. 0.5 mm. Disc 2-lobed, ca. 1.5 mm, glabrous. Pistil ca. 1 cm; ovary puberulent. Style ca. 7 mm, nearly glabrous; stigma obtrapeziform, ca. 0.5 mm, 2-lobed. Capsule narrowly ovoid, ca. 6 × 2.5 mm. Fl. Jul–Aug, fr. Aug.

• Stony cliffs or rocks; 400–500 m. S Anhui (Xiuning Xian).

4. *Chiritopsis confertiflora* W. T. Wang, *Bull. Bot. Res.*, Harbin 1(3): 25. 1981.

密小花苣苔 *mi xiao hua ju tai*

Petiole 2.5–5.5 cm, puberulent to pilose; leaf blade rhombic-ovate to nearly elliptic, 7.5–11 × 4.5–7 cm, puberulent to villous, base cuneate to broadly cuneate, margin dentate to crenate, apex acute to obtuse; lateral veins conspicuous. Cymes dense, 7–12-flowered; peduncle 8–14 cm, spreading puberulent; bracts narrowly lanceolate to elliptic, 5–7 × 1–1.2 mm, margin entire. Pedicel 0.2–2 mm, densely spreading puberulent. Calyx segments narrowly linear-lanceolate, ca. 4.5 × 0.7–0.8 mm, outside puberulent, inside sparsely puberulent. Corolla yellowish, ca. 7.2 mm, inside sparsely puberulent below abaxial lip; tube ca. 5 × 3 mm; limb distinctly 2-lipped; adaxial lip ca. 0.8 mm; abaxial lip ca. 2.2 mm. Stamens adnate to corolla ca. 2 mm above base, glabrous; filaments linear, ca. 3 mm; staminodes 2, ca. 1 mm. Disc ringlike, ca. 0.5 mm, glabrous. Pistil ca. 5 mm, puberulent. Style ca. 2.8 mm; stigma obtrapeziform, ca. 0.3 mm, 2-lobed. Fruit and seeds unknown. Fl. Jun.

• Rocks by rivers in montane regions; ca. 300 m. NW Guangdong (Yangshan Xian).

5. *Chiritopsis cordifolia* D. Fang & W. T. Wang in W. T. Wang, Bull. Bot. Res., Harbin 2(4): 54. 1982.

心叶小花苣苔 xin ye xiao hua ju tai

Petiole 5.5–16.5 cm, densely puberulent; leaf blade ovate to reniform, 4–8.5 × 3–9 cm, puberulent, base cordate, margin repand-crenate to obtusely dentate, apex acute to rounded; lateral veins conspicuous. Cymes lax, 8–18-flowered; peduncle ca. 5 cm, densely puberulent; bracts linear, 2–3 × ca. 0.3 mm, margin entire. Pedicel 0.4–1.8 cm, densely puberulent. Calyx segments triangular, 3.5–4 × 0.8–1 mm, outside puberulent, inside glabrous. Corolla white, ca. 1.4 cm, inside puberulent along 2 longitudinal lines below abaxial lip; tube ca. 11 × 5 mm; limb indistinctly 2-lipped; adaxial lip ca. 3 mm; abaxial lip ca. 3.5 mm. Stamens adnate to corolla ca. 3 mm above base, sparsely puberulent; filaments linear, ca. 3.5 mm; staminodes 2, 2.8–3 mm. Disc ringlike, ca. 0.8 mm, glabrous. Pistil ca. 1 cm; ovary densely brownish puberulent. Style ca. 6.5 mm, puberulent near base; stigma obtrapeziform, ca. 0.6 mm, 2-lobed. Fruit and seeds unknown. Fl. Apr.

• Cliffs in limestone hills. C Guangxi (Liujiang Xian).

6. *Chiritopsis subulata* W. T. Wang, Guihaia 6: 8. 1986.

钻丝小花苣苔 zuan si xiao hua ju tai

Petiole 3–7 cm, spreading pubescent to pilose; leaf blade ovate to broadly so, 3–4 × 2.2–3.6 cm, pubescent and pilose, base cordate to rounded, margin remotely denticulate to entire, apex acute to obtuse; lateral veins inconspicuous. Cymes dense or lax, 9- to many flowered; peduncle 8–9 cm, spreading pubescent to pilose; bracts linear to lanceolate, 5.5–7 × 1.8–2 mm, margin entire. Pedicel 1.5–3.5 mm, brownish pubescent. Calyx segments lanceolate-linear, 4.5–5 × 0.6–1 mm, puberulent to pilose. Corolla white, ca. 1 cm, inside puberulent along longitudinal lines on abaxial lip; tube ca. 8 × 4 mm; limb indistinctly 2-lipped; adaxial lip ca. 1.2 mm; abaxial lip ca. 2 mm. Stamens adnate to corolla 1–1.5 mm above base, puberulent; filaments subulate, 3.5–4 mm; staminodes absent. Disc ringlike, ca. 0.6 mm, glabrous. Pistil ca. 8.5 mm, puberulent. Style ca. 5.7 mm; stigma obtrapeziform, ca. 0.9 mm, 2-lobed. Fruit and seeds unknown. Fl. Jun–Sep.

• Caves in limestone hills; ca. 100 m. S Guangdong (Yangchun Xian, Zhaoqing Xian).

- 1a. Leaf blade base cordate to nearly so, apex acute to obtuse; cymes dense, branched 2 ×, ca. 9-flowered 6a. var. *subulata*
- 1b. Leaf blade base truncate-cordate to rounded, apex obtuse; cymes lax, branched 4 ×, ca. 35-flowered 6b. var. *yangchunensis*

6a. *Chiritopsis subulata* var. *subulata*

钻丝小花苣苔(原变种) zuan si xiao hua ju tai (yuan bian zhong)

Leaf blade base cordate to nearly cordate, apex acute to obtuse. Cymes dense, branched 2 ×, ca. 9-flowered. Fl. Jun.

• Cave walls in limestone hills; ca. 100 m. S Guangdong (Zhaoqing Xian).

6b. *Chiritopsis subulata* var. *yangchunensis* W. T. Wang, Guihaia 12: 299. 1992.

阳春小花苣苔 yang chun xiao hua ju tai

Leaf blade base truncate-cordate to rounded, apex obtuse. Cymes lax, branched 4 ×, ca. 35-flowered. Fl. Aug–Sep.

• Rocks in caves in limestone hills. SW Guangdong (Yangchun Xian).

7. *Chiritopsis bipinnatifida* W. T. Wang, Bull. Bot. Res., Harbin 1(3): 26. 1981.

羽裂小花苣苔 yu lie xiao hua ju tai

Petiole 2–6.5 cm, puberulent to pilose; leaf blade ovate to rhombic, 2–6 × 1.5–4 cm, puberulent to pilose, base broadly cuneate, margin pinnatifid, lobes 3 or 4 pairs, each narrowly ovate to triangular, 1- or 2-lobed or entire, apex acute to obtuse; lateral veins inconspicuous. Cymes lax, 5–7-flowered; peduncle 7–8 cm, sparsely puberulent; bracts lanceolate, ca. 4.5 × 1.5 mm, margin entire. Pedicel 4–10 mm, puberulent. Calyx segments narrowly triangular, 4–5 × ca. 1 mm, outside densely puberulent, inside sparsely puberulent. Corolla white, ca. 1 cm, inside sparsely puberulent above; tube ca. 7 × 3.5 mm; limb distinctly 2-lipped; adaxial lip ca. 1.2 mm; abaxial lip ca. 3.5 mm. Stamens adnate to corolla ca. 2 mm above base, glabrous; filaments linear, ca. 4 mm; staminodes 3, ca. 0.8 mm. Disc ringlike, ca. 0.3 mm, glabrous. Pistil ca. 8 mm, puberulent. Style ca. 5 mm; stigma obtrapeziform, ca. 0.5 mm, 2-lobed. Capsule ovoid, ca. 3 × 2 mm. Fl. Jun, fr. Oct.

• Limestone hills. NE Guangxi (Lingui Xian).

8. *Chiritopsis lobulata* W. T. Wang, Bull. Bot. Res., Harbin 2(4): 55. 1982.

浅裂小花苣苔 qian lie xiao hua ju tai

Petiole 2.2–5(–8) cm, white puberulent to sparsely pilose; leaf blade ovate to orbicular or reniform, 2–3.5 × 2.5–3.8 cm, adaxially puberulent to pilose, abaxially more densely puberulent along veins, base cordate, margin nearly palmately lobed, lobes 4–6 pairs, each broadly ovate, apex rounded to obtuse, 5-veined or basal veins not touching, apex obtuse; lateral veins conspicuous to inconspicuous. Cymes lax, ca. 7-flowered; peduncle 6–10 cm, sparsely white puberulent to pilose; bracts oblanceolate to linear, 4–8 × 0.8–3 mm, margin entire to few denticulate apically. Pedicel 3–10 mm, white puberulent. Calyx segments linear-lanceolate, 3–4 × 0.4–0.7 mm, outside white puberulent to pilose, inside glabrous. Corolla white, ca. 7.8 mm, inside glabrous; tube ca. 5 × 3 mm; limb distinctly 2-lipped; adaxial lip ca. 1.4 mm; abaxial lip ca. 2.5 mm. Stamens adnate to corolla ca. 2 mm above base, glabrous; filaments linear, ca. 3 mm; staminode 1, ca.

0.2 mm. Disc 2-lobed, ca. 0.8 mm, glabrous. Pistil ca. 4.2 mm, sparsely puberulent. Style ca. 3 mm; stigma obtrapeziform, ca. 0.2 mm, 2-lobed. Capsule ellipsoid, ca. 2.5×1.2 mm. Fl. May–Jun, fr. Jun.

• Shaded rocks in limestone hills; ca. 300 m. NW Guangdong (Yangshan Xian).

9. *Chiritopsis glandulosa* D. Fang, L. Zeng, & D. H. Qin, Acta Phytotax. Sin. 31: 470. 1993.

紫腺小花芭苔 zi xian xiao hua ju tai

Petiole 7–10 cm, glandular pubescent and purple glandular; leaf blade reniform to orbicular, $3-12 \times 3-16.3$ cm, glandular puberulent and purple glandular, base cordate, margin palmately lobed, lobes 4–8 pairs and ovate to broadly so, 5-veined, apex rounded to obtuse; lateral veins conspicuous. Cymes lax, 7- to many flowered; peduncle 7–18 cm, glandular pubescent and purple glandular; bracts leaflike, obovate to oblong or narrowly lanceolate, $0.4-1.8 \times 0.2-1.5$ cm, margin serrate to entire. Pedicel 1.5–6 cm, glandular pubescent and purple glandular. Calyx segments lanceolate, $3-8 \times 1.3-2$ mm, outside glandular puberulent and purple glandular, inside nearly glabrous. Corolla white, 1.1–1.3 cm, inside sparsely pubescent; tube $7-8 \times 4-5$ mm; limb distinctly 2-lipped; adaxial lip ca. 1.5 mm; abaxial lip 3–4 mm. Stamens adnate to corolla ca. 2.5 mm above base, sparsely pubescent; filaments linear, 3.5–4 mm; staminodes 2 or 3, seldom absent, ca. 0.5 mm. Disc ringlike, ca. 0.7 mm, glandular. Pistil ca. 1 cm, glandular puberulent. Style ca. 7.5 mm; stigma obtrapeziform, ca. 0.6 mm, 2-lobed. Capsule narrowly ovoid, $3-5 \times$ ca. 1.5 mm. Fl. May–Jun, fr. Jun.

• Rocks in limestone hills; 200–300 m. NE Guangxi (Pingle Xian).

