

**53. WHYTOCKIA** W. W. Smith, Trans. & Proc. Bot. Soc. Edinburgh 27: 338. 1919.

异叶苣苔属 *yi ye ju tai shu*

*Oshimella* Masamune & Suzuki.

Herbs, perennial, terrestrial, not rhizomatous. Stems erect or ascending, simple or branched. Leaves few, along stem, opposite, very unequal in each pair; leaf blade sparsely puberulent, base strongly oblique, cuneate to cordate. Inflorescences lax, axillary or pseudoterminal, few- to many-flowered cymes; bracts apparently absent. Calyx actinomorphic, 5-sect from base or 5-lobed; segments equal, with many longitudinal secretory canals. Corolla white, reddish, or purple, zygomorphic, inside sparsely puberulent below abaxial lip or with lines of hairs; tube subtubular to funnellform-tubular, not swollen, longer than limb, 4–6 mm in diam.; limb 2-lipped; adaxial lip 2-lobed, slightly shorter than to subequal to abaxial lip; abaxial lip 3-lobed, lobes equal or central lobe longer, apex rounded. Stamens 4, adnate to corolla tube near base, included; anthers dorsifixed, coherent, thecae divergent, confluent at apex, dehiscent longitudinally; connective not projecting; staminode 1, adnate to adaxial side of corolla tube. Disc ringlike. Ovary ovoid to depressed globose, 2-loculed; placenta 1, axile, projecting inward, 2-cleft. Stigmas 2, equal, suborbicular, undivided, or 1, terminal, disclike, undivided. Capsule straight in relation to pedicel, subglobose, globose, or depressed globose, shorter than calyx, dehiscent loculicidally to base; valves 2, or dehiscent irregularly. Seeds unappendaged.

• Six species: endemic to China.

1a. Stigmas 2.

- 2a. Leaf blade margin denticulate; pistil ca. 1.4 cm; calyx glabrous outside; corolla ca. 2.5 cm; filaments 8–10 mm ..... 1. *W. chiritiflora*
- 2b. Leaf blade margin irregularly repand-serrate; pistil ca. 8 mm; calyx puberulent outside; corolla 1.7–2 cm; filaments 4–6 mm ..... 2. *W. bijieensis*

1b. Stigma 1.

- 3a. Stems erect; petiole to 10 mm; staminode linear.
  - 4a. Calyx 5-sect from base, tube absent, glabrescent to sparsely puberulent outside; corolla 1–1.8 cm; filaments 2–5 mm; anthers ca. 0.7 mm wide; pistil 3–6 mm; cymes axillary ..... 3. *W. tsiangiana*
  - 4b. Calyx 5-lobed, tube ca. 1.5 mm, puberulent outside; corolla 1.8–2.1 cm; filaments 4–6.5 mm; anthers ca. 1.2 mm wide; pistil ca. 9 mm; cymes pseudoterminal ..... 4. *W. hekouensis*
- 3b. Stems ascending, basally procumbent; petiole to 2(–3) mm; staminode ovate or broadly ovate.
  - 5a. Peduncle sparsely white or brown puberulent; leaf blade green or greenish, adaxially sparsely puberulent, apex acuminate; calyx 2.5–3.5 mm, glabrescent outside; cymes axillary; corolla white, outside glabrous; pistil ca. 2.2 mm; stigma orbicular ..... 5. *W. sasakii*
  - 5b. Peduncle purple pubescent and purple glandular; leaf blade purple abaxially, adaxially pilose, apex acute to narrowly obtuse; calyx 3.5–5.5 mm, purple pubescent and purple glandular pubescent outside; cymes pseudoterminal; corolla blue-purple, outside purple pubescent and purple glandular; pistil 5–6.5 mm; stigma elliptic to reniform-elliptic ..... 6. *W. purpurascens*

**1. Whytockia chiritiflora** (Oliver) W. W. Smith, Trans. & Proc. Bot. Soc. Edinburgh 27: 338. 1919.

异叶苣苔 *yi ye ju tai*

*Stauranthera chiritiflora* Oliver, Hooker's Icon. Pl. 25: pl. 2454. 1896.

Stems puberulent, glabrescent. Normal leaves sessile or short petioled; leaf blade pale green, oblique, oblong-ovate to oblong, to 15 × 6 cm, sparsely puberulent, base strongly oblique, cuneate on narrow side, rounded on other, margin denticulate, apex acuminate; reduced leaf blade ovate, to 2 cm. Cymes axillary; peduncle 3.5–6 cm, puberulent. Calyx 5-sect from base; segments ovate, ca. 4.5 mm, outside glabrous. Corolla pink, ca. 2.5 cm,

outside glabrous, inside sparsely puberulent below abaxial lip; tube subtubular, ca. 1.5 × 0.9 cm; adaxial lip ca. 4 mm; abaxial lip ca. 9 mm. Filaments 8–10 mm, apically puberulent; anthers ca. 1.2 mm wide; staminode up to 1.5 mm. Pistil ca. 1.4 cm, glabrous. Style ca. 1.1 cm; stigmas 2, capitate. Fl. Dec.

• SE Yunnan (Mengzi Xian).

**2. Whytockia bijieensis** Y. Z. Wang & Z. Y. Li, Acta Phytotax. Sin. 35: 67. 1997.

毕节异叶苣苔 *bi jie yi ye ju tai*

Stems 20–50 cm, erect, brownish pubescent and glandular, glabrescent. Normal leaves subsessile or with petiole to 4 mm; leaf blade oblique, narrowly ovate to

narrowly ovate-oblong, 6–15 × 2–4 cm, sparsely pubescent, base strongly oblique, cuneate on narrow side, rounded to cordate on other, margin irregularly repand-serrate, apex acuminate; reduced leaves sessile to subsessile, ovate to broadly ovate, 0.6–2.1 cm. Cymes axillary, often near branch apex; peduncle 2–6 cm, pubescent and glandular. Calyx 5-sect from base; segments ovate to triangular-ovate, 3–4 × ca. 2 mm, outside puberulent. Corolla reddish, 1.7–2 cm, outside glabrous, inside with orangish clavate hairs between abaxial lip lobes near mouth; tube funnellform-tubular, ca. 1 cm; adaxial lip ca. 3 mm; abaxial lip 5–6 mm. Adaxial filaments ca. 4 mm, abaxial ones ca. 6 mm, puberulent; anthers ca. 1.1 mm wide; staminode narrowly ovate, ca. 1.1 mm. Pistil ca. 8 mm, glabrous. Style ca. 4.8 mm; stigmas 2, ovate. Capsule ca. 6 mm in diam. Fl. and fr. Sep–Oct.

• Shady and moist places by streams; ca. 1500 m. W Guizhou (Bijie Xian).

**3. Whytockia tsiangiana** (Handel-Mazzetti) A. Weber, Notes Roy. Bot. Gard. Edinburgh 40: 365. 1982.

白花异叶苣苔 *bai hua yi ye ju tai*

Stems 14–30(–40) cm, erect, brownish to whitish puberulent, glabrescent. Normal leaves sessile or with petiole to 7 mm; leaf blade whitish to green or purplish, oblique, ovate to ovate-oblong, 3.2–13 × 1–4.5 cm, adaxially sparsely puberulent, abaxially sparsely puberulent along veins, base strongly oblique, cuneate on narrow side, subcordate to broadly cuneate on other, margin indistinctly or distinctly denticulate to serrate, seldom dentate, apex acute to acuminate; reduced leaf blade broadly ovate, 4–14 mm. Cymes axillary; peduncle 3–4.5(–6) cm, glandular puberulent. Calyx 5-sect from base; segments ovate, 3–4(–5) × 1.5–3 mm, outside glabrescent to sparsely puberulent. Corolla white to purplish or reddish, 1–1.8 cm, outside glabrous, inside sparsely puberulent basally and below abaxial lip; tube subtubular, 0.8–1.2 cm × 4–8 mm; adaxial lip 2–4.5 mm; abaxial lip ca. 4.8 mm. Filaments 2–5 mm, puberulent; anthers ca. 0.7 mm wide; staminode linear, ca. 0.8 mm. Pistil 3–6 mm, glabrous. Style 1–4 mm; stigma 1, elliptic. Capsule ca. 4 mm in diam. Fl. Jul–Sep, fr. Sep–Oct.

• Shaded streamside rocks, shaded areas in montane regions, valley forests; 500–2200 m. N Guangxi, Guizhou, SW Hubei, W Hunan, S and W Sichuan, SE Yunnan.

- 1a. Leaf blade to 9.5 cm, margin distinctly denticulate to dentate, teeth to 2 mm; corolla ca. 1.8 cm; filaments 4–5 mm; stems to 40 cm ..... 3c. var. *wilsonii*
- 1b. Leaf blade to 13 cm, margin indistinctly denticulate to crenate, teeth 0.2–0.5 mm, or merely glands; corolla ca. 1 cm; filaments 2–3.5 mm; stems to 30 cm.

- 2a. Corolla white; leaf blade green or greenish, to 13 cm ..... 3a. var. *tsiangiana*
- 2b. Corolla purplish or reddish; leaf blade purplish, to 11.5 cm ..... 3b. var. *minor*

**3a. Whytockia tsiangiana** var. *tsiangiana*

白花异叶苣苔(原变种) *bai hua yi ye ju tai* (yuan bian zhong)

*Stauranthera tsiangiana* Handel-Mazzetti, Sinensia 5: 19. 1934.

Stems to 30 cm. Leaf blade whitish to green or purplish, to 13 cm, margin indistinctly denticulate to crenate, teeth 0.2–0.5 mm, or merely glands. Corolla white, ca. 1 cm. Filaments 2–3.5 mm. Fl. Aug–Sep, fr. Sep–Oct.

• Shaded streamside rocks, valley forests; 500–1500 m. N Guangxi, Guizhou, SW Hubei, W Hunan, S Sichuan, SE Yunnan.

**3b. Whytockia tsiangiana** var. *minor* (W. W. Smith) A. Weber, Notes Roy. Bot. Gard. Edinburgh 40: 365. 1982.

屏边异叶苣苔 *ping bian yi ye ju tai*

*Whytockia chiritiflora* (Oliver) W. W. Smith var. *minor* W. W. Smith, Trans. & Proc. Bot. Soc. Edinburgh 27: 338. 1919.

Stems to 30 cm. Leaf blade green or greenish, to 11.5 cm, margin indistinctly denticulate to crenate, teeth 0.2–0.5 mm, or merely glands. Corolla purplish or reddish, ca. 1 cm. Filaments 2–3.5 mm. Fl. Jul.

• Shaded rocks, valley forests; 1300–2200 m. SE Yunnan (Pingbian Xian).

**3c. Whytockia tsiangiana** var. *wilsonii* A. Weber, Notes Roy. Bot. Gard. Edinburgh 40: 365. 1982.

峨眉异叶苣苔 *e mei yi ye ju tai*

Stems to 40 cm. Leaf blade purplish, to 9.5 cm, margin distinctly denticulate to dentate, teeth to 2 mm. Corolla purplish or white, ca. 1.8 cm. Filaments 4–5 mm. Fl. Jul–Aug.

• Shaded areas in montane regions; 800–1200 m. W Guizhou (Bijie Xian), S and W Sichuan.

**4. Whytockia hekouensis** Y. Z. Wang, Acta Phytotax. Sin. 33: 300. 1995.

河口异叶苣苔 *he kou yi ye ju tai*

Stems 20–40 cm, erect, brownish pubescent and glandular, glabrescent. Normal leaves sessile or with petiole to 10 mm; leaf blade green or greenish, sometimes oblique, oblong to ovate-oblong, 4–13 × 2–5 cm, adaxially sparsely pubescent, abaxially pubescent along veins, base strongly oblique, cuneate on narrow side, cuneate to cordate on other, margin repand-serrulate and glandular, apex acuminate; reduced leaves sessile, broadly ovate to ovate, 0.8–2.5 cm. Cymes pseudoterminal; peduncle 2–5 cm, pubescent and glandular. Calyx ca. 4.5 mm, 5-lobed; tube ca. 1.5 mm; lobes broadly ovate to ovate-triangular, ca. 3 × 2.5–3

mm, outside puberulent. Corolla pink, 1.8–2.1 cm, outside glabrous, inside with 2 longitudinal series of yellowish green clavate hairs below mouth and between abaxial lip lobes; tube funnelform-tubular, ca. 1.4 cm × 4 mm; adaxial lip ca. 3 mm; abaxial lip ca. 6 mm. Adaxial filaments ca. 4 mm, abaxial ones ca. 6.5 mm, puberulent near apex; anthers ca. 1.2 mm wide; staminode linear, ca. 1.5 mm. Pistil ca. 9 mm, glabrous. Style ca. 6 mm; stigma 1, elliptic. Capsule 5–6 mm in diam. Fl. Jul–Dec, fr. Dec–Jan.

• Shaded areas in stream valleys; ca. 1300 m. SE Yunnan (Hekou Xian).

**5. *Whytockia sasakii*** (Hayata) B. L. Burtt, Bull. Misc. Inform. Kew 1941: 33. 1941.

台湾异叶苣苔 tai wan yi ye ju tai

*Rhynchoglossum sasakii* Hayata, Icon. Pl. Formos. 6: 34. 1916; *Oshimella formosana* Masamune & Suzuki; *O. sasakii* (Hayata) Masamune & Suzuki.

Stems 18–50 cm, ascending, basally procumbent, brownish puberulent, glabrescent. Normal leaves sessile or petiole to 2(–3) mm; leaf blade green or greenish, oblique, ovate to ovate-oblong, 1.8–10.5 × 0.6–3.5 cm, adaxially sparsely puberulent, abaxially sparsely puberulent along veins, base strongly oblique, cuneate on narrow side, rounded, subcordate, or cuneate on other, margin indistinctly denticulate to serrate, apex acuminate; reduced leaf blade ovate to lanceolate, 0.5–1.5 cm. Cymes axillary; peduncle 0.8–4.5 cm, sparsely white or brown puberulent. Calyx 5-sect from base; segments ovate, 2.5–3.5 × 1.8–3 mm, outside glabrescent. Corolla white, 0.8–1.5 cm, outside glabrous, inside sparsely puberulent below abaxial lip; tube subtubular, 4–7 × 4–6 mm; adaxial lip 1.5–2 mm; abaxial lip 4–8 mm. Filaments 2–2.5 mm, puberulent; anthers ca. 0.6 mm wide; staminode ovate, ca. 0.6 mm. Pistil ca. 2.2 mm, glabrous. Style 1–2 mm; stigma 1, orbicular. Capsule 2–4 mm in diam. Fl. Jun–Sep, fr. Sep–Oct.

• Forests on wet hillsides and streambanks; 500–1900 m. Taiwan.

*Whytockia sasakii* is unusual in having ovaries 2-loculed basally and 1-loculed above.

**6. *Whytockia purpurascens*** Y. Z. Wang, Acta Phytotax. Sin. 33: 297. 1995.

紫红异叶苣苔 zi hong yi ye ju tai

Stems ascending, basally procumbent, purple pubescent, glabrescent. Normal leaves sessile or with petiole to 1 mm; leaf blade purple abaxially, sometimes oblique, ovate to ovate-oblong, 6–14 × 3.3–6.7 cm, adaxially purple pilose, abaxially purple pubescent, base strongly oblique, cuneate on narrow side, rounded to auriculate on other, margin nearly entire to repand-crenate, apex acute to narrowly obtuse; reduced leaves sessile, ovate to broadly ovate, 3–13 mm. Cymes pseudoterminal;

peduncle 2.6–4 cm, purple pubescent and purple glandular. Calyx 5-sect from base; segments narrowly oblong to ovate-lanceolate, 3.5–5.5 × 1–1.7 mm, outside purple pubescent and purple glandular pubescent. Corolla blue-purple, 1.5–1.8 cm, outside purple pubescent and purple glandular, inside with yellow-green clavate hairs between abaxial lip lobes near mouth; tube funnelform-tubular, ca. 8 × 6 mm; adaxial lip ca. 2.5 mm; abaxial lip 5–7 mm. Adaxial filaments ca. 3 mm, abaxial ones ca. 4.5 mm, puberulent near apex; anthers ca. 0.9 mm wide; staminode broadly ovate, ca. 0.8 mm. Pistil 5–6.5 mm, glabrous. Style 4–4.7 mm; stigma 1, elliptic-reniform elliptic. Capsule 3–3.5 mm in diam. Fl. Jul–Dec, fr. Dec–Jan.

• Shaded and moist areas in stream valleys; ca. 1300 m. SE Yunnan (Hekou Xian).

