

18. BOEICA C. B. Clarke, Commelyn. *Cyrtandr.* Bengal. 118. 1874.
短筒苣苔属 *duan tong ju tai shu*

Boeicopsis H. W. Li.

Subshrubs or herbs, perennial, epipetric or terrestrial, rhizomatous, sometimes stoloniferous, stemmed or seldom stemless. Leaves few to many, on stem and alternate, ± crowded near stem apex or basal; leaf blade puberulent to densely woolly or glabrescent, base cuneate to attenuate. Inflorescences lax, sometimes umbel-like, axillary, 1- to many-flowered cymes; bracts 2 and opposite, rarely several and whorled. Calyx actinomorphic, 5-sect from base; segments equal. Corolla white to pink or blue to purple, zygomorphic, inside glabrous or puberulent; tube campanulate, not swollen, sometimes saccate at base, slightly shorter than limb, 3–7 mm in diam.; limb slightly 2-lipped; adaxial lip 2-lobed, slightly shorter than to as long as abaxial lip; abaxial lip 3-lobed, lobes equal or subequal, apex rounded to acute. Stamens 4, adnate to corolla near base, included; anthers basifixed, free, thecae subparallel, confluent at apex, dehiscing longitudinally, poricidally, or transversely; connective not projecting; staminode 1, adnate to adaxial side of corolla tube. Disc ringlike or inconspicuous. Ovary ovoid or conical, 1-loculed; placentas 2, parietal, projecting inward, 2-cleft. Stigma 1, terminal, capitate, undivided. Capsule straight in relation to pedicel, linear to narrowly oblong, much longer than calyx, dehiscing loculicidally to base; valves 2, straight, not twisted. Seeds unappendaged.

About 12 species: Bhutan, S China, N India, Myanmar, N Vietnam; seven species in China.

- 1a. Style with 2 broad and flat winglike appendages; petiole and leaf blade hirsute adaxially; corolla tube saccate at base; ovary glabrous 7. *B. yunnanensis*
- 1b. Style unappendaged; petiole and leaf blade villous, woolly, or puberulent adaxially; corolla tube not swollen; ovary sparsely puberulent to villous.
 - 2a. Cymes 1-flowered; lateral veins 4–6 on each side of midrib; plants always stemless; corolla 10–12 mm; anthers dehiscing longitudinally 3. *B. guileana*
 - 2b. Cymes 3- to many flowered; lateral veins 7–16 on each side of midrib; plants with stems (0.5–)4–30 cm; corolla 3–6 mm; anthers dehiscing poricidally or transversely (unknown in *B. fulva*).
 - 3a. Pedicels 10–20 mm; stems 0.5–7 cm; bracts 4–7 mm.
 - 4a. Leaf blade broadly elliptic or ovate to obovate, 3.5–10 × 2.8–5.5 cm, adaxially villous, base cuneate to rounded, margin serrulate to serrate; lateral veins 7–9 on each side of midrib 2. *B. stolonifera*
 - 4b. Leaf blade ovate-elliptic, 8–20 × 3–11 cm, adaxially appressed puberulent, base attenuate, margin coarsely serrate; lateral veins 10–13 on each side of midrib 4. *B. ferruginea*
 - 3b. Pedicels 0.4–2.5 mm; stems 6–14 cm; bracts 1–5 mm.
 - 5a. Leaf blade margin irregularly shallowly denticulate, adaxially woolly, glabrescent; peduncle 10–15 cm 6. *B. fulva*
 - 5b. Leaf blade margin serrate, adaxially densely puberulent or sparsely villous; peduncle 3.5–10 cm.
 - 6a. Leaf blade adaxially sparsely villous, abaxially sparsely villous, veins densely villous; lateral veins 8–11 on each side of midrib; anthers dehiscing poricidally; peduncle densely villous . 1. *B. porosa*
 - 6b. Leaf blade adaxially densely puberulent, abaxially woolly; lateral veins 14–16(–20) on each side of midrib; anthers dehiscing transversely; peduncle pubescent 5. *B. multinervia*

1. *Boeica porosa* C. B. Clarke in A. & C. de Candolle, *Monogr. Phan.* 5: 136. 1883.

孔药短筒苣苔 *kong yao duan tong ju tai*

Boeica tonkinensis (Kraenzlin) B. L. Burt;

Didymocarpus tonkinensis (Kraenzlin) Handel-Mazzetti;

Oreocharis tonkinensis Kraenzlin.

Subshrubs. Stems 10–30 cm, densely villous. Petiole 0.5–2.8 cm, densely villous; leaf blade obovate to elliptic, 4.5–18 × 3.5–6.5 cm, adaxially sparsely villous, abaxially sparsely villous, densely villous along veins,

base sometimes oblique, cuneate to rounded, margin serrate, apex acute to broadly acute; lateral veins 8–11 on each side of midrib. Cymes 3- to many flowered; peduncle 3.5–8 cm, densely villous; bracts 2, sometimes several, linear to oblong, 1.5–5 mm. Pedicel 0.8–2.5 mm. Calyx segments narrowly lanceolate to elliptic, 4–5 × 1–1.3 mm, outside densely villous, margin entire to dentate. Corolla white to pinkish, 3–7 mm, outside glabrescent; tube not swollen, 1–1.5 mm; lobes

suborbicular, 2–5 × 2.5–4 mm. Filaments 0.6–1.5 mm, glabrous; anthers dehiscing poricidally; staminode ca. 0.3 mm. Disc ringlike. Pistil puberulent and glandular puberulent; ovary conical, 1.2–1.5 mm. Style unappendaged, 1.4–3 mm. Capsule 2–2.8 cm. Fl. Jun–Aug, fr. Aug.

Rocks in forests on slopes; 800–1200 m. SE Yunnan [Myanmar, N Vietnam].

2. *Boeica stolonifera* K. Y. Pan, Acta Phytotax. Sin. 26: 439. 1988.

匍茎短筒苣苔 pu jing duan tong ju tai

Herbs. Stems 0.5–7 cm, densely hirsute and woolly. Petiole 1–4.5 cm, densely villous; leaf blade broadly elliptic or ovate to obovate, 3.5–10 × 2.8–5.5 cm, adaxially villous, abaxially villous and puberulent, densely villous along veins, base cuneate to rounded, margin serrulate to serrate, apex acute to obtuse; lateral veins 7–9 on each side of midrib. Cymes 5–15-flowered; peduncle 3.5–7.5 cm, densely villous; bracts 2, linear to narrowly triangular or obovate-oblong, 4–6 mm. Pedicel 1–2 cm. Calyx segments lanceolate to linear, 2–6 × ca. 1 mm, outside villous, margin sparsely dentate to entire. Corolla bluish, ca. 4.5 mm, outside puberulent; tube not swollen, 1–1.5 mm; lobes suborbicular, ca. 3.2 × 3 mm. Filaments ca. 1 mm, glabrous; anthers dehiscing poricidally; staminode ca. 0.5 mm. Disc ringlike. Ovary ovoid, 2–2.3 mm, sparsely puberulent to glabrescent. Style unappendaged, 2.2–4.2 mm, glabrous. Capsule 1.8–2.2 cm. Fl. May–Jul, fr. Jul.

Shady and damp forests; 200–900 m. SE Guangxi [N Vietnam].

3. *Boeica guileana* B. L. Burt, Notes Roy. Bot. Gard. Edinburgh 35: 371. 1977.

紫花短筒苣苔 zi hua duan tong ju tai

Herbs, stemless. Petiole 1–3 cm, densely villous; leaf blade elliptic to obovate or ovate, 2–6 × 1.1–3.2 cm, villous and puberulent, abaxially more densely villous along veins, base cuneate to rounded, margin serrate to double serrate, apex acute to rounded; lateral veins 4–6 on each side of midrib. Cymes 1-flowered; peduncle 2.5–5.5 cm, villous; bracts 2, linear, 2.5–3 mm. Pedicel 1–2 cm. Calyx segments lanceolate to linear, 3–5 × ca. 1 mm, outside villous, margin entire. Corolla blue-purple, 1–1.2 cm, outside puberulent; tube not swollen, 1.5–2.5 mm; adaxial lip 2-lobed from middle, lobes oblong, 5–7 × 4–5 mm; abaxial lip 3-sect from base, lobes obovate-oblong to spatulate, 1–1.1 cm × 4.5–6 mm. Filaments 2.5–3.5 mm, sparsely puberulent; anthers dehiscing longitudinally; staminode apparently absent. Disc ringlike. Ovary conical, 2–3.5 mm, villous. Style unappendaged, 4–7 mm, pubescent to puberulent. Capsule 0.7–1.4 cm. Fl. and fr. Jul.

• Damp rocks in forests in steep ravines or on cliffs; 200–700 m. Hong Kong.

4. *Boeica ferruginea* Drake del Castillo, Bull. Soc. Philom. Paris, sér. 8, 2: 129. 1890.

锈毛短筒苣苔 xiu mao duan tong ju tai

Herbs. Stems 4–6 cm, woolly to villous or pilose. Petiole 3–5 cm, densely villous; leaf blade ovate-elliptic, 8–20 × 3–11 cm, adaxially appressed puberulent, abaxially sparsely woolly to glabrescent, woolly to villous along veins, base attenuate, margin coarsely serrate, apex acute; lateral veins 10–13 on each side of midrib. Cymes many flowered; peduncle 5–8 cm, villous; bracts 2, oblong, 6–7 mm. Pedicel 1–2 cm. Calyx segments linear-lanceolate, 1–4 × 0.4–0.7 mm, outside villous, margin sparsely dentate. Corolla 5–6 mm, outside sparsely pubescent; tube not swollen, ca. 2 mm; adaxial lip slightly shorter than abaxial, lobes ca. 2 mm. Filaments ca. 1.5 mm, glabrous; anthers dehiscing poricidally; staminode ca. 0.2 mm. Disc ringlike. Ovary conical, 1.5–2 mm, sparsely pubescent. Style unappendaged, 4–7 mm, glabrescent. Capsule ca. 2 cm. In shady and damp areas of dense forests; 300–1200 m. SE Yunnan (Jinping Xian) [N Vietnam].

5. *Boeica multinervia* K. Y. Pan, Acta Phytotax. Sin. 26: 439. 1988.

多脉短筒苣苔 duo mai duan tong ju tai

Herbs. Stems 6–14 cm, woolly. Petiole 1.5–2.5 cm, woolly; leaf blade ovate to obovate, 5.5–11 × 2.8–5.2 cm, adaxially densely puberulent, abaxially woolly, base oblique, cuneate, margin serrate, apex acute; lateral veins 14–16(–20) on each side of midrib. Cymes 10–20-flowered; peduncle 6–10 cm, pubescent; bracts 2, linear to obovate-oblong, 3–4 mm. Pedicel ca. 0.5 mm. Calyx segments linear-lanceolate, ca. 3 × 0.4 mm, outside puberulent, margin entire. Corolla ca. 6 mm, outside glabrescent; tube not swollen, ca. 2.2 mm; adaxial lip lobes ca. 1.6 mm; abaxial lip lobes narrowly ovate, ca. 2 mm. Filaments ca. 1 mm, glabrous; anthers dehiscing transversely; staminode ca. 0.2 mm. Disc inconspicuous. Ovary conical, ca. 1.5 mm, sparsely puberulent. Style unappendaged, ca. 8 mm, glabrous. Fruit unknown. Fl. Aug.

• Hilly regions; 400–500 m. SW Yunnan (Yingjiang Xian).

6. *Boeica fulva* C. B. Clarke, Commelyn. Cyrtandr. Bengal. 119. 1874.

短筒苣苔 duan tong ju tai

Herbs. Stems to at least 15 cm, woolly, glabrescent. Petiole 0.6–6.5 cm, woolly; leaf blade lanceolate-elliptic to oblanceolate, 10–17 × 4.5–6.5 cm, adaxially woolly, glabrescent, abaxially densely woolly, base narrowly cuneate to rounded, margin irregularly shallowly denticulate, apex acute to acuminate; lateral veins 11–16 on each side of midrib. Cymes many flowered; peduncle 10–15 cm, woolly, glabrescent; bracts 2, linear, 1–5 mm. Pedicel 0.4–1 mm. Calyx segments narrowly triangular to linear-lanceolate, 1–2.5 mm, outside puberulent to woolly, margin entire. Corolla purple, ca. 4 mm; tube not swollen. Filaments ca. 1.5 mm. Ovary conical, ca. 1.5 mm, puberulent.

Flora of China 18: 287–289. 1998.

Style unappendaged, 1–1.5 mm, glabrous. Capsule 7–10 mm.

Montane regions; 1300–1400 m. SE Xi zang (Zay Xian) [Bhutan, NE India].

7. *Boeica yunnanensis* (H. W. Li) K. Y. Pan, Fl. Reipubl. Popularis Sin. 69: 260. 1990.

翼柱短筒苣苔 yi zhu duan tong ju tai

Boeicopsis yunnanensis H. W. Li, Acta Bot. Yunnan. 4: 245. 1982.

Subshrubs. Stems to 12 cm, densely villous. Petiole 1–2 cm, densely hirsute; leaf blade ovate to ovate-elliptic, 6.5–7.5 × 4–5 cm, adaxially hirsute, abaxially pubescent, densely hirsute along veins, base broadly cuneate to rounded, margin serrate, apex acute to broadly acute; lateral veins ca. 6 on each side of midrib. Cymes ca. 9-flowered; peduncle 5.5–6.5 cm, densely villous to hirsute; bracts 2, linear-lanceolate, to 5 mm. Pedicel ca. 5 mm. Calyx segments linear-lanceolate, ca. 5 × 1 mm, outside hirsute to villous, margin minutely serrulate. Corolla 5–6.5 mm, outside glabrous; tube saccate at base, ca. 3 mm; lobes subequal, suborbicular, ca. 2 × 2 mm. Filaments ca. 1.5 mm, glabrous; anthers dehiscent poricidally; staminode ca. 1 mm. Disc inconspicuous. Pistil glabrous; ovary ovoid, ca. 1.2 mm. Style with 2 broad and flat winglike appendages, ca. 2.5 mm. Fruit unknown. Fl. Jun.

• Grassy areas under forests on slopes; ca. 1300 m. SE Yunnan (Maguan Xian).

