

**40. LAGOCHILUS** Bunge ex Bentham, *Labiata. Gen. Spec.* 640. 1834.

兔唇花属 tu chun hua shu

Subshrubs or perennial herbs. Rootstocks woody. Stems green-white, rigid, sparsely hirsute. Leaf blade rhombic, palmatipartite or pinnatipartite; lobes spinescent, sometimes subtending sterile spinescent bracteoles. Verticillasters 2–10-flowered. Calyx campanulate to tubular-campanulate, 5-veined; throat oblique, straight; teeth 5, subequal or 3 posterior teeth longer, triangular to oblong or broadly ovate, usually longer than tube, apex spinescent. Corolla villous outside, pilose annulate inside, 2-lipped; upper lip oblong, straight, slightly concave, 2-lobed or 4-toothed; lower lip obliquely spreading, 3-lobed; middle lobe largest, obcordate, 2-lobulate; lateral lobes straight, acute, or emarginate. Stamens 4, exerted or subincluded, anterior 2 longer; filaments complanate; anther cells 2, parallel or divergent, ciliate. Style filiform, apex subequally 2-cleft. Nutlets flattened-obconical, oblong-obovoid or oblong-ovoid, apex truncate or rounded, glandular, dusty hairy, scaly or glabrous, smooth.

About 35 species: Asia, 11 species in China.

- 1a. Leaf axils of sterile branches without spinescent bracteoles.
  - 2a. Calyx tube oblong-lanceolate ..... 4. *L. ilicifolius*
  - 2b. Calyx teeth triangular.
    - 3a. Calyx tube and bracteoles glabrous ..... 2. *L. bungei*
    - 3b. Calyx tube and bracteoles hairy.
      - 4a. Calyx teeth erect or slightly oblique, subequal, tube densely bristly; bracteoles densely strigose, capitate glandular ..... 1. *L. hirtus*
      - 4b. Calyx teeth projected, 2 anterior shorter, tube sparsely hairy at base; bracteoles spreading hairy ..... 3. *L. pungens*
- 1b. Leaf axils with spinescent bracteoles.
  - 5a. Calyx teeth 4, rarely 5; apical leaf blade broadly cuneate or flabellate, awned-serrate toward apex ..... 7. *L. xinjiangensis*
  - 5b. Calyx teeth 5; leaf blade broadly cuneate to rhombic, deeply divided or lobed.
    - 6a. Calyx teeth ovate to broadly ovate, shorter than to as long as tube.
    - 6b. Calyx teeth oblong or lanceolate, longer than tube.
      - 7a. Leaf base cuneate to round; blade 1- or 2-pinnatipartite ..... 8. *L. grandiflorus*
      - 7b. Leaf base cuneate; blade 3-lobed, lobes toothlike or ovate-oblong.
        - 8a. Leaf blade broadly rhombic, lobes obtuse, spinescent; nodes glabrous ..... 5. *L. diacanthophyllus*
        - 8b. Leaf blade cuneate-rhombic, lobes spinescent-aristate; basal nodes lanate, apical nodes tomentose ..... 6. *L. lanatonodus*
    - 9a. Spinescent bracteoles glabrous; calyx tube sparsely villous; upper lip of corolla 2-cleft, middle lobe of lower lip short 2-toothed, lateral lobes dentate ..... 11. *L. kaschgaricus*
    - 9b. Spinescent bracteoles sparsely hispid or villous; calyx tube densely villous or tomentose, glandular hairy; upper lip of corolla 2- or 3-lobulate, middle lobe of lower lip 2-lobulate or entire.
      - 10a. Calyx teeth ovate, apex acute, tube sparsely tomentose; lobes of upper lip of corolla 2-lobulate, lobes of lower lip entire ..... 10. *L. platyacanthus*
      - 10b. Calyx teeth broadly ovate, apex rounded, tube densely villous; lobes of upper lip of corolla many lobulate, lobes of lower lip 2-toothed at apex ..... 9. *L. macrodontus*

**1. *Lagochilus hirtus*** Fischer & C. Meyer, *Enum. Pl. Nov.* 32. 1841.

硬毛兔唇花 ying mao tu chun hua

*Lagochilus brachyacanthus* C. Y. Wu & Hsuan.

Herbs perennial. Stems ca. 16 cm, much branched, sparsely strigose. Petiole 5–8 mm, absent in apical leaves; leaf blade cuneate, 1.2–2 cm×7–12 mm, 3-lobed, papery, base attenuate, forming a winged petiole; lobes of basal leaves with 2 or more triangular lobules, short spinescent, glabrous, dusty glandular. Verticillasters 4–6-flowered; bracteoles spinescent, 4–7 mm. Calyx narrowly campanulate, ca. 13×6.5 mm, densely bristly; teeth triangular, subequal, 4–5 mm, straight or slightly oblique. Corolla ca. 2.6 cm; limb sparsely hairy, densely glandular; upper lip straight, lobes ca. 5 mm, apex rounded to truncate; middle lobe of lower lip ca. 2.5×6.5 mm, apex 2-lobulate, lobules and lateral lobes triangular. Anterior stamens to 1/2 as long as upper corolla lip. Ovary glabrous.

Gravelly slopes. Xinjiang [Kazakhstan].

**2. *Lagochilus bungei*** Bentham, *Labiata. Gen. Spec.* 641. 1834.

阿尔泰兔唇花 a er tai tu chun hua

*Lagochilus altaicus* C. Y. Wu & Hsuan.

Herbs perennial. Stems to 24 cm, base glabrous, apex sparsely hirsute. Petiole to 2.5 cm, winged in basal leaves, obsolete in upper leaves; leaf blade cuneate, 1–1.5×0.5–2 cm, pinnatipartite; lobes oblong, 2–7 mm, transparent glandular, apex mucronate or rounded, not spinescent. Verticillasters ca. 6-flowered; bracteoles spinescent, to 7 mm, glabrous. Calyx campanulate, ca. 10×6 mm, glabrous; teeth triangular, ca. 2 mm, subequal, apex spinescent, spines 1.5–2 mm. Corolla reddish, 2.5 cm, white villous; upper lip 1.7–1.9 cm×7 mm, lobules subtruncate; lower lip 1–1.1 cm, pubescent; middle lobe obcordate, ca. 4×9 mm; lateral lobes triangular, ca. 3 mm. Anterior stamens ca. 1.1 cm, posterior stamens 8–9 mm; filament base pubescent. Ovary glabrous. Nutlets flattened-obconical, ca. 2.5×1.7 mm, apex truncate. Fl. Jul, fr. Sep.

Dry slopes; 500 m. Xinjiang [Kazakhstan].

Kazakhstan material so named differs by the hairy calyx.

**3. *Lagochilus pungens*** Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint Pétersbourg 2: 195. 1844.

锐刺兔唇花 rui ci tu chun hua

*Lagochilopsis pungens* (Schrenk) Knorring.

Herbs perennial. Stems numerous, 15–25 cm, branched, base woody, spreading hairy. Leaves leathery, cuneate, 3–5-lobed, glabrous, glandular; lobes triangular or circular, apical spine 2–2.5 mm. Verticillasters 6–10-flowered; bracteoles 7–12 mm, linear-subulate, sparsely spreading hairy. Calyx tubular-campanulate; teeth triangular, 3–5 mm, anterior teeth shorter than posterior teeth, ca. 1/2 as long as to longer than tube, apical spine ca. 2.5 mm; tube sparsely hairy toward base. Corolla reddish, ca. 2×as long as calyx; upper lip lobes linear; middle lobe of lower lip with 2 broadly ovate lobules, lateral lobes ovate-triangular. Stamens nearly as long as corolla. Nutlets smooth. Fl. May-Jul.

Hilly or desert grasslands dominated by *Artemisia*. Xinjiang [Kazakhstan, Mongolia].

**4. *Lagochilus ilicifolius*** Bunge ex Bentham, Labiat. Gen. Spec. 641. 1834.

冬青叶兔唇花 dong qing ye tu chun hua

Herbs perennial. Stems branched, diffuse, 10–20 cm, base woody, white minutely hispid. Leaves sessile; leaf blade cuneate-rhombic, ca. 10×5–9 mm, firmly leathery, glabrous, base cuneate, apex 3–5-incised-toothed; teeth short awned, whitish green. Verticillasters 2–4-flowered; bracteoles spinescent, ca. 8 mm, glabrous. Calyx tubular-campanulate, ca. 12×6 mm, whitish green, firmly leathery, glabrous; teeth ca. 5 mm, oblong-lanceolate, apex short spinescent, posterior tooth ca. 7 mm. Corolla yellowish with distinct purple-brown veins, 2.5–2.7 cm; upper lip ca. 1.8×0.6 cm, white lanate outside, white strigose inside; lower lip ca. 1.5×1 cm, 3-partite, puberulent outside, glabrous inside; middle lobe obcordate, ca. 8×10 mm, apex 2-lobulate; lateral lobes ovate, ca. 4.2×3.5 mm, apex 2-toothed. Posterior stamens ca. 2 cm, anterior ca. 2.4 cm. Ovary glabrous. Fl. Jul-Sep, fr. Oct.

Sandy areas, thickets on gentle slopes in semideserts; 800–2000 m. Gansu, Nei Mongol, Ningxia, Shaanxi [Mongolia, Russia].

**5. *Lagochilus diacanthophyllum*** (Pallas) Bentham, Labiat. Gen. Spec. 641. 1834.

二刺叶兔唇花 er ci ye tu chun hua

*Moluccella diacanthophyllum* Pallas, Nova Acta Acad. Sci. Imp. Petrop. Hist. Acad. 10: 380. 1797; *Lagochilus chingii* C. Y. Wu & Hsuan; *L. obliquus* C. Y. Wu & Hsuan.

Herbs perennial. Stems 15–25 cm, white, base woody, branched, sparsely villous, apex and nodes glabrous. Petiole of basal leaves to 2 cm, narrowly winged, upper leaves subsessile; leaf blade broadly rhombic, 2–3.5×1.5–2.5 cm, papery, adaxially sparsely minutely hispid, abaxially densely white transparent glandular, base attenuate-decurrent, pinnatipartite; basal lobes with 3 circular to oblong, apically awned to spinescent lobules. Verticillasters 4–6-flowered; bracteoles white-green, needlelike or subulate, 0.4–1.6 cm, glabrous, apex spinescent. Calyx campanulate, ca. 1.7×0.7 cm, glabrous; teeth oblong, anterior teeth ca. 5 mm; posterior

teeth 7–8 mm, obtuse, mucronate, margin ciliolate. Corolla purplish, ca. 3.4 cm, densely pubescent, base glabrous; upper lip ± straight, ca. 2 cm, margin villous, lobes ovate, apex 2- or 4-toothed; lower lip ca. 1.6 cm, middle lobe obcordate, ca. 6×9 mm; lateral lobes triangular, ca. 4×2.5 mm, glabrous, obtuse. Anterior stamens ca. 1.6 cm, posterior stamens ca. 1.4 cm. Ovary apex white scaly. Fl. Jul-Aug.

Sandy or gravelly dry slopes, valleys; 1100–2000 m. Xinjiang [Kazakhstan, Kyrgyzstan].

**6. *Lagochilus lanatonodus*** C. Y. Wu & Hsuan, Acta Phytotax. Sin. 10: 216. 1965.

毛节兔唇花 mao jie tu chun hua

Herbs perennial. Stems 15–25 cm, much branched, woody, minutely hispid; nodes ± swollen, basal nodes lanate, surrounded by persistent sheaths, upper nodes tomentose. Leaves cuneate-rhombic, 1–1.6×0.7–1.4 cm, leathery, adaxially glabrous or sparsely minutely hispid, abaxially pubescent or glabrous, base cuneate, apex 3-lobed; lobes 3–5-lobulate, spinescent-aristate. Verticillasters 2-flowered; bracteoles spinescent, 4–12 mm, glabrous. Calyx tubular-campanulate, ca. 1.8×0.8 cm, teeth to as long as tube or rarely longer, narrowly oblong-lanceolate, leathery, netted, obtuse, apex short spinescent. Corolla reddish, ca. 3 cm, pubescent; upper lip straight, ca. 2×0.7 cm, white villous outside; lower lip ca. 1.7×0.9 cm; middle lobe obcordate, ca. 8×8 mm, apex 2-lobulate; lateral lobes lanceolate, ca. 4×2 mm, apex 2-toothed. Anterior filaments ca. 1.8 cm, posterior filaments 1.5 cm. Ovary tuberculate. Nutlets black-brown, flattened-obconical, ca. 4×2 mm, dusty hairy, apex truncate. Fl. Jun-Aug.

• Dry hills, stony desert steppes; 900–2400 m. Xinjiang.

**7. *Lagochilus xinjiangensis*** G. J. Liu, Bull. Bot. Res. 5(1): 132. 1985.

新疆兔唇花 xin jiang tu chun hua

Herbs perennial. Stems 6–20 cm, base branched, rigid, creamy white, pubescent; nodes swollen, tomentose, basal ones lanate, surrounded by persistent brown sheaths. Basal leaves long petiolate, upper stem leaves sessile; basal leaf blade broadly cuneate, margin incised; lobules awned, apex 3-cleft; upper leaf blade broadly cuneate or flabellate, 8–12×6–10 mm, herbaceous, sparsely whitish hispid, glandular puberulent, base cuneate, margin regularly serrate apically; teeth ca. 2 mm, awned, apex obtuse. Verticillasters 2-flowered; bracteoles spinescent, 0.5–2 cm, glabrous. Calyx narrowly campanulate, 0.8–1.5 cm, whitish hispid, glandular puberulent; teeth 4 (or 5), to slightly longer than calyx, oblong-lanceolate, leathery, netted, obtuse, apex short spinescent. Corolla rose, ca. 2 cm, puberulent; upper lip straight, ca. 12×4 mm, oblong, rounded, villous outside, with ovate, apically retuse lobules; lower lip ca. 10×5 mm, middle lobe oblong, ca. 5 mm, apex 2-lobulate; lateral lobes ca. 3 mm, lanceolate, rounded. Anterior filaments ca. 1.1 cm, posterior ca. 9 mm. Fl. Jun, fr. Aug.

• Xinjiang (Urumqi shi).

**8. *Lagochilus grandiflorus*** C. Y. Wu & Hsuan, Acta Phytotax. Sin. 10: 217. 1965.

大花兔唇花 da hua tu chun hua

Herbs perennial. Stems 10–30 cm tall, much branched from base, ± diffuse, white when dry, minutely hispid. Leaves broadly ovate, 2.8–4×2.2–3.2 cm, leathery, adaxially sparsely minutely hispid, glandular, abaxially pubescent and more densely glandular, base cuneate to rounded, 1- or 2-pinnatipartite; lobes 2.2–4.2 mm wide, apex rounded or acute, short spinescent. Verticillasters ca. 6-flowered; bracteoles yellow-white, needlelike, 2–15 mm, sparsely white ciliate, margin glabrescent. Calyx narrowly tubular-campanulate, ca. 2.3×0.7 cm, densely puberulent, glandular, glabrous on tube otherwise pubescent inside; teeth oblong, 9–14×3.5–4.5 mm, leathery, acute, apex short spinescent. Corolla reddish, ca. 4.6 cm, white villous; upper lip ca. 3×1.1 cm, glabrous inside, lobes 2-lobulate; lower lip obovate-cuneate, ca. 2.5×1.2 cm; middle lobe ca. 11×5 mm, apex 2-lobulate; lateral lobes ovate, ca. 5×4 mm, emarginate. Anterior stamens ca. 2.8 cm, posterior stamens ca. 2.3 cm. Ovary glabrous. Fl. Jun.

- Rocky slopes. Xinjiang.

**9. *Lagochilus macrodontus*** Knorr, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 13: 236. 1950.

大齿兔唇花 da chi tu chun hua

*Lagochilus iliensis* C. Y. Wu & Hsuan.

Herbs perennial. Stems ca. 30 cm tall, white, sparsely minutely hispid, base branched, subglabrous. Petiole 2–4 mm; leaf blade rhombic-triangular, 2.2–3×2.1–3 cm, leathery, minutely hispid, densely so abaxially, glandular, pinnatipartite, base abruptly attenuate into a narrowly winged petiole; lobes ovate to oblong, basal 2 3-partite or pinnatipartite, apex rounded, short spinescent. Verticillasters 4–8-flowered; bracteoles subulate, horizontal or slightly reflexed, 0.8–1.5 cm, apex spreading hispid, base glabrescent. Calyx narrowly campanulate, ca. 1.9×0.7 cm; teeth broadly ovate, ca. 6×4.5–5.5 mm, netted, apex rounded, short spinescent; tube densely spreading villous, glandular hairy. Corolla rose, 2.5–3×as long as calyx; upper lip straight, lobes many lobulate, margin villous; middle lobe of lower lip 2-lobed, lobules ovate to circular, all lobes 2-toothed at apex.

Dry, gravelly slopes. Xinjiang [Kyrgyzstan, Tajikistan].

**10. *Lagochilus platyacanthus*** Ruprecht, Mém. Acad. Imp. Sci. Saint Pétersbourg 14: 68. 1869.

阔刺兔唇花 kuo ci tu chun hua

Herbs perennial. Stem 15–25 cm, branched from base, strigose. Petiole 0.5–1.7 cm, winged; leaf blade rhombic in outline, upper blades circular, pinnatipartite; lobes linear or ovate, margin ciliate, apex acute. Verticillasters 4–8-flowered; bracteoles lanceolate, 7–12 mm, apex conspicuously awned spinescent, densely villous, capitate glandular. Calyx narrowly campanulate; tube sparsely tomentose, glandular hairy; teeth ovate, acute, 6–7×4–5 mm. Corolla ca. 2×as long as calyx; lobes of upper lip 2-lobulate; middle lobe of lower lip emarginate, lateral lobes oblong.

Dry, gravelly slopes. Xinjiang [Kyrgyzstan, Tajikistan].

Non-Chinese material so named has the calyx tube densely tomentose outside.

**11. *Lagochilus kaschgaricus*** Ruprecht, Mém. Acad. Imp. Sci. Saint Pétersbourg 14: 67. 1869.

喀什兔唇花 ka shi tu chun hua

Herbs perennial. Stems numerous, 15–19 cm tall, gray whitish, glabrous, pubescent toward apex. Leaf blade broadly rhombic, 1- or 2-pinnatipartite, glabrous or sparsely villous, base attenuate into a short wide petiole; lobes oblong, margin involute and ciliate, apex obtuse or acute, with spines 1–1.5 mm. Verticillasters 4–6-flowered; bracts robust, needlelike-spinescent, spreading, 1.5–2.3 cm, glabrous. Calyx tubular-campanulate, tube sparsely villous; teeth broadly ovate, 6–8×5 mm, apex spinescent-subacute, spines ca. 1 mm. Corolla rose, ca. 2×as long as calyx; upper lip much longer than lower lip, lobules 3-toothed; middle lobe of lower lip emarginate, lateral lobes oblong, apex 2-toothed.

Dry slopes. Xinjiang [Kyrgyzstan].

