

17. LOPHANTHUS Adanson, Fam. Pl. 2: 194. 1763.

扭藿香属 niu huo xiang shu

Herbs perennial. Stem leaves short petiolate to sessile, dentate or incised-toothed. Cymes axillary; bracts small, linear-lanceolate to linear, rarely lanceolate. Calyx tubular to tubular-campanulate, straight or ± incurved, apex regular or oblique; teeth 5, subequal, ± 2-lipped [or not], (12–)15-veined, pilose annulate inside. Corolla straight or incurved; tube exerted, gradually dilated upward, twisted; limb 2-lipped, twisted at 90–180° so that position of lips is ± reversed; upper lip (true lower) 3-lobed, middle lobe largest; lower lip (true upper) 2-lobed. Stamens 4, exerted or included; anther cells parallel or almost not divergent. Style exerted, rarely included, apex equally or subequally 2-cleft. Nutlets brown, oblong-ovoid, slightly flattened, smooth.

Eighteen species: Kazakhstan, Kyrgyzstan, Mongolia, Russia, SW Asia; four species in China.

- 1a. Leaves sessile, irregularly incised or dentate 4. *L. tibeticus*
- 1b. Leaves ± petiolate, crenate.
 - 2a. Calyx 2-lipped, upper lip longer, teeth lanceolate to ovate-lanceolate; peduncle to 1.5 cm 3. *L. schrenkii*
 - 2b. Calyx teeth subequal, ovate to narrowly ovate.
 - 3a. Calyx tubular-campanulate, with ovate teeth; peduncle more than 5 mm, basal peduncles to 1 cm 1. *L. chinensis*
 - 3b. Calyx tubular, slightly dilated at limb, with narrow teeth; peduncle less than 5 mm 2. *L. krylovii*

1. *Lophanthus chinensis* Bentham, Edward's Bot. Reg. 15: t. 1282. 1829.

扭藿香 niu huo xiang

Stems branched, pubescent, glandular. Petiole short; leaf blade ovate, 1.5–3×1–2.5 cm, ± pubescent, glandular, base rounded to cordate, margin crenate, apex obtuse to rounded. Cymes 3–6- or more flowered; peduncle ca. 1 cm to almost absent; bracts linear-lanceolate. Calyx tubular-campanulate, 7–9 mm; limb dilated, 15-veined, pubescent, glandular, pilose annulate inside; teeth subequal, ovate, apex acute. Corolla 1.7–2 cm, pubescent; tube exerted, throat dilated; middle lobe of apparent upper lip circular, apex emarginate, lateral lobes small; lobes of apparent lower lip elliptic-oblong. Anterior stamens exerted. Fl. Oct.

- Slopes. Xinjiang [Mongolia, Russia].

A report of this species from Hebei may be incorrect since no specimens from this province have been seen.

2. *Lophanthus krylovii* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 24: 122. 1905.

阿尔泰扭藿香 a er tai niu huo xiang

Stems numerous, erect or ascending, 20–30 cm tall, puberulent, glandular hairy. Leaves sometimes subsessile upward; petiole less than 1 cm, rarely to 1.5 cm; leaf blade ovate to ovate-cordate, 1–2.5×0.8–2(–3) cm, densely pubescent, glandular, base cordate, rarely subtruncate to rounded, margin crenate, apex obtuse to acute. Cymes widely spaced; peduncle 1–5 mm; bracts small, linear-lanceolate, pubescent. Calyx tubular-campanulate to subtubular, slightly dilated at apex, 8–9 mm, 12–15-veined, densely pubescent, glandular, throat pilose annulate; upper lip 3-toothed; lower calyx teeth 2, shorter, narrowly ovate to oblong-ovate, apex acute. Corolla blue, 1.6–1.8 cm, pubescent; tube exerted, dilated at apex; middle lobe of apparent upper lip emarginate or 2-lobed, lateral lobes broadly elliptic; lobes of apparent lower lip subcircular. Anterior stamens exerted. Nutlets oblong-ellipsoid, ca. 2 mm. Fl. Jun-Aug.

- Shady areas in valleys, near springs, slopes; 2000–2500 m. Xinjiang (Altay Shan, Tian Shan) [Kazakhstan, Mongolia, Russia].

3. *Lophanthus schrenkii* Levin, Bot. Mater. Gerb. Bot. Inst. Komorova Akad. Nauk. SSSR 7: 218. 1937.

天山扭藿香 tian shan niu huo xiang

Stems erect, branched, pilose. Leaves subsessile upward; petiole ca. 1 cm; leaf blade ovate to narrowly ovate, 1.5–3×0.9–2.1 cm, villous, abaxially sparsely glandular, ± corrugate when dry, base shallowly cordate to truncate or rounded, margin crenate, apex obtuse to acute. Cymes 3- to many flowered; peduncle 8–15 mm. Calyx tubular-campanulate, dilated at apex, 1–1.2 cm, 15-veined, villous, pilose annulate inside, mouth oblique, upper lip longer; teeth lanceolate to ovate-lanceolate. Corolla blue, 1.7–2.1 cm, ± pubescent; tube exerted; middle lobe of apparent upper lip emarginate, margin undulate; lateral lobes smaller, subcircular; lobes of apparent lower lip broadly elliptic-oblong. Anterior stamens exerted. Fl. Aug.

- Stony slopes. Xinjiang [Kazakhstan, Kyrgyzstan].

4. *Lophanthus tibeticus* C. Y. Wu & Y. C. Huang, Acta Phytotax. Sin. 10: 150. 1965.

西藏扭藿香 xi zang niu huo xiang

Stems erect, ca. 0.5 m tall, few branched, pubescent, glandular. Leaves sessile; leaf blade ovate, 2.5–4×1.4–3 cm, ± leathery or herbaceous, corrugate, pubescent, glandular, margin irregularly incised-toothed, apex rounded to obtuse. Cymes as long as to slightly shorter than leaves; peduncle 1–1.5 cm; bracts linear to needlelike-linear ca. 1.5 cm×1.5 mm. Calyx tubular-campanulate, 1.2–1.5 cm, 15-veined, 2-lipped, conspicuously veined; teeth mucronate-acute. Corolla purplish, 1.5–1.7 cm, sparsely pubescent, twisted through an angle of 90°. Anterior stamens exerted. Fl. Sep.

- Rocky crevices beside rivers; 4400 m. Xizang.

