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Oxytropis lhasaensis (Fabaceae), a new species from Xizang (Tibet) in China, with supplementary notes on the section *Sericopetala*

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Oxytropis lhasaensis X.Y. Zhu *sp. nova* (Fabaceae) from Xizang in China is described and illustrated. It belongs to *Oxytropis* sect. *Sericopetala* and is related to *O. sericopetala* and *O. parasericopetala*. Supplementary taxonomic notes on this section are provided.

Key words: *Oxytropis*, Fabaceae, new species, taxonomy

The genus *Oxytropis* belongs to the tribe Galegeae of Papilionoideae in Fabaceae. It consists of ca. 300 species occurring in cold mountainous regions of Europe, Asia and North America, and is most diverse in Central Asia (Polhill 1980). Bunge (1874) recognised 181 species of *Oxytropis* and classified them in four subgenera and 19 sections. For Chinese *Oxytropis*, 125 species, four varieties and four forms were grouped into three subgenera and 20 sections by Zhu and Ohashi (2000). The section *Sericopetala*, established by Chang (1989) with two species, now comprises three species. The section can be distinguished from the other sections by having the standard and wings sericeous at back (Zhu & Ohashi 2000) and plants with dense silvery or buff-tomentose hairs.

The specimens are deposited in the Herbarium of the Institute of Botany, the Chinese Academy of Sciences (PE). The terminology used in describing the new species follows Harris and Harris (1994).

***Oxytropis* section *Sericopetala* C.W. Chang**

Perennial herbs, vested with dense silvery or buff-tomentose hairs; stem short; stipules adnate to petiole and connate to half-way, with appressed, long, dense, sericeous hairs; raceme subcapitate; flower blue-purple, violet, or white; standard and keel-petal with appressed, dense, sericeous hairs at back; pods cylindric-ovoid or ovoid, with appressed, sericeous hairs.

TYPE SPECIES: *Oxytropis sericopetala* Prain *ex* C.E.C. Fischer.

Oxytropis lhasaensis* X.Y. Zhu, *sp. nova (Figs. 1 and 2)

Species Oxytropida sericopetala et O. parasericopetala affinis, sed differt corolla alba, foliolis anguste-ellipticis, calyces pilis mere albis (nec

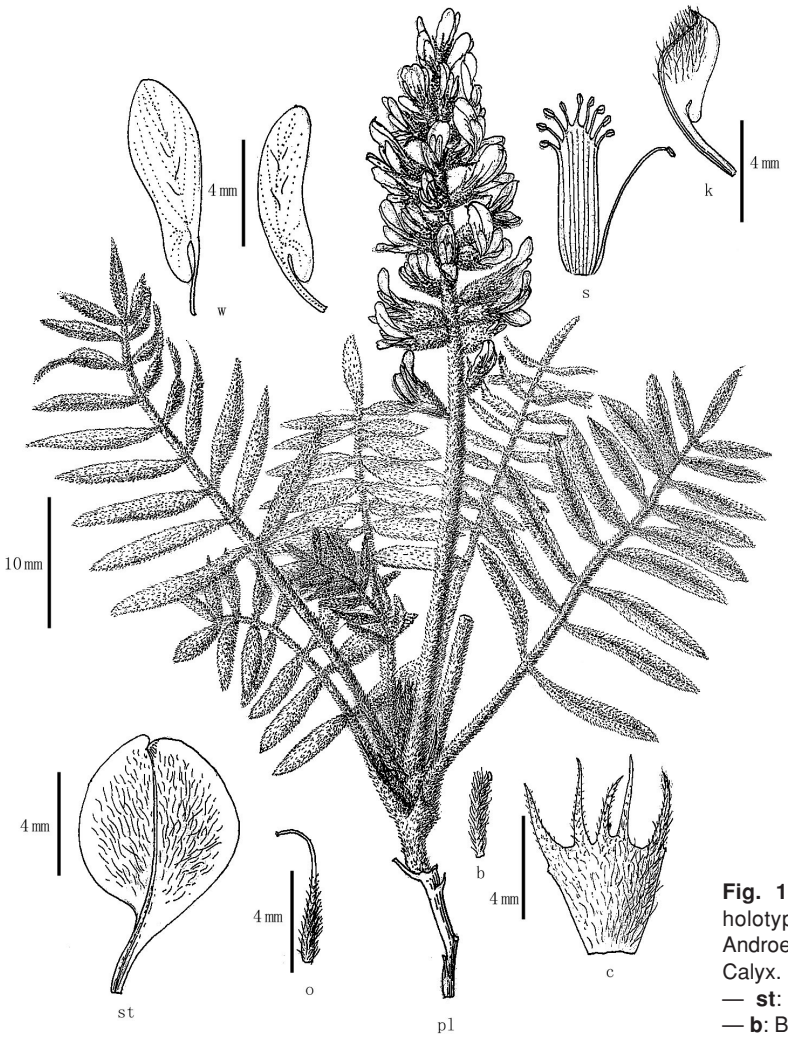

Fig. 1. *Oxytropis lhasaensis* (from holotype). — **k**: Keel-petal. — **s**: Androecium (view from outside). — **c**: Calyx. — **o**: Gynoecium. — **pl**: Habit. — **st**: Standard (view from inside). — **b**: Bract. — **w**: Wing.

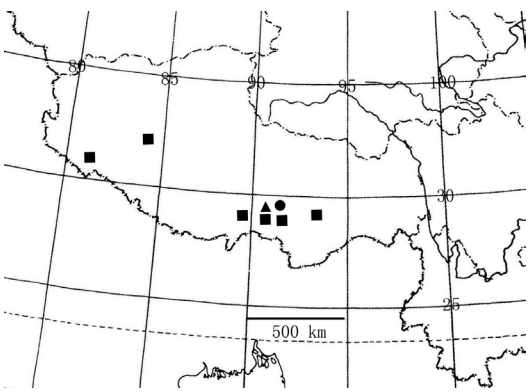

Fig. 2. Distribution of *Oxytropis* section *Sericopetala*: *O. lhasaensis* (▲), *O. parasericopetala* (●), *O. sericopetala* (■).

albi-nigripilosus) et dentibus cum tubum aequalibus, 3–4 mm longis, 0.2–0.3 mm latis.

Type: China. Xizang (Tibet), on sandland of riverbank, near Sela Temple, Lhasa City, 3700 m, 20.VIII.1965 *Y. T. Zhang & K. Y. Lang 2156* (holotype PE).

Perennial, 10–11 cm tall. Leaves with appressed silvery or buff-tomentose hairs, 4–7 cm long, with 4–8 leaflet pairs per leaf; mature leaflets opposite, narrowly elliptic, 11.5–21 mm long, 1.7–2.5 mm wide, with appressed white hairs or sometimes with glands, young leaflets opposite, 7–15.5 mm long, 1–2 mm wide, narrowly elliptic or linear, usually conduplicate, with appressed, long white hairs, petiolule absent or 2–3 mm

Table 1. Diagnostic characters of *Oxytropis lhasaensis* and the two morphologically closest species.

Characters	*O. lhasaensis*	*O. sericopetala*	*O. parasericopetala*
Stem	10–11 cm	10–20 cm	7–9 cm
Leaves	4–7 cm	7–20 cm	3–5 cm
Leaflets	two types, 4–8 pairs, narrowly elliptical	two types, 6–15 pairs lanceolate or elliptical	oblong or ovate-lanceolate
Calyx	appressed with white hairs, 6–8 × ca. 3 mm	appressed with white and black hairs, 8–10 × 2–4 mm	appressed with white and black hairs, 10–12 × ca. 3 mm
Lobes	3–4 × 0.2–0.3 mm	4.5–5 × ca. 1.2 mm	7–9 × ca. 0.3 mm
Tube	3–4 × 0.2–0.3 mm	ca. 3.5 × 1–2 mm	3–5 × ca. 2 mm
Flowers	white	purple	purple
Standard	dense sericeous at back 10–11 mm long	dense sericeous at back 9–12 mm long	dense sericeous at back 8–10 mm long
Wings	glabrous at back	glabrous at back	glabrous at back
Keel	sericeous at back	sericeous at back	sericeous at back
Beak	0.2–0.5 mm long	ca. 0.3 mm long	ca. 0.2 mm long

long; stipules with appressed, long white hairs, herbaceous, triangular, 7.5–10 mm long, 3.5–4.5 mm wide, connate to petiole at base, free at 1/3 length from base. Racemes 7–12 cm long, longer than leaves; bracts with appressed, white hairs, subulate, 3–4 mm long, ca. 0.2 mm wide. Calyx with white hairs, campanulate, 6–8 mm long, ca. 3 mm wide, 5-lobed, lobes subulate, 3.0–4.0 mm long, 0.2–0.3 mm wide, tube 3.0–4.0 mm long. Corolla white, standard nearly round, 10–11 mm long, 6.0–7.0 mm wide, slightly emarginate at apex, lamina 6.0–7.0 mm long, 6.0–7.0 mm wide, densely sericeous at back, narrowed at base, claw 3.0–3.5 mm long, ca. 0.5 mm wide; wings 9.0–10 mm long, clawed, lamina subglabrous or glabrous at back, obovate, 5.5–6.0 mm long, 2.0–3.0 mm wide, rounded at apex, tapering to a claw, claw 2.5–3.5 mm long, ca. 0.15 mm wide, auriculate at base, auricle 1.5–2.0 mm long, 0.5–1.0 mm wide; keel-petals clawed, 6.5–7.5 mm long, lamina sericeous at back, obovate, 5.0–5.5 mm long, 2.0–2.5 mm wide, claw 2.5–3.0 mm long, ca. 0.5 mm wide, auriculate at base, auricle ca. 0.2 mm long, ca. 0.5 mm wide, beak 0.2–0.5 mm long. Androecium diadelphous, ca. 6.5–7.5 mm long. Ovary with appressed, long white hairs, tubular, ca. 3 mm long, ca. 0.3–0.4 mm wide, style incurved, with appressed white hairs at base, ca. 3.0–4.0 mm long. Pods unknown. Flowering August.

Distribution. Known only from Xizang (Tibet) in China (Fig. 2).

Ecology. On sandy soil on riverbank. The population is small.

Oxytropis lhasaensis differs from *O. sericopetala* and *O. parasericopetala* by its white flower, leaflets narrowly elliptic, calyx having only appressed, white hairs, and lobes being equal to tube, 3–4 mm long and 0.2–0.3 mm wide. A more detailed comparison is provided in Table 1.

Acknowledgements

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