

Hedysarum jaxartucirdes (Fabaceae), a new species from Xinjiang, China

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Received 15 June 2006, revised version received 19 Sep. 2006, accepted 20 Sep. 2006

Sa, R. 2007: *Hedysarum jaxartucirdes* (Fabaceae), a new species from Xinjiang, China. — *Ann. Bot. Fennici* 44: 157–159.

Hedysarum jaxartucirdes Y. Liu ex R. Sa *sp. nova* (Fabaceae) is described from Xinjiang, China. It belongs to sect. *Subacaulia* and appears to be close to *H. ferganense*. The diagnostic characters, as well as a full description and a detailed illustration are provided. The seed ultrastructure was examined by SEM.

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

Hedysarum belongs to Hedysareae of Fabaceae and has ca. 100 species (Polhill 1981) mostly distributed in temperate regions of the northern hemisphere, with several species also in the arctic regions. More than 40 species are recorded from China (Shue 1998), of which ca. 20 species occur in Xinjiang (Yang 1983).

In the course of studying *Hedysarum* in China, the author found specimens in PE and KUN collected in Xinjiang Province and determined as *H. jaxartucirdes* by Ying Liu, but that taxon has remained undescribed. It belongs to sect. *Subacaulia*, since it is a perennial herb with the calyx lobe ca. 2–2.5 times longer than tube, the stem very short, the basal leaves clustered, etc.

Hedysarum jaxartucirdes Y. Liu ex R. Sa, *sp. nova* (Figs. 1 and 2)

Species nova *H. ferganensi* affinis, atqua difert: *Planta cano-pilosis, foliola* 5–9, 0.9–2 ×

0.5–1.1 cm, corolla rosa, alae semicirculares vel auriculates, 1/3 vel ultra vix longiores quam vexillum, et legumen 1–2 loculis.

TYPE: China. Xinjiang: Qinghe County, Dabanshan Pass, 2400 m, 8.VIII.1956 *Ching Ren-Chang* 1605 (holotype PE 19560808; isotype KUN).

Acaulescent perennial herb, ca. 10 cm tall. Roots woody. Leaves with gray hairs, 6–12 cm long, clustered; leaflets opposite, 5–9 per leaf, ovate-oblong or narrow-obovate, 0.9–2 cm long, 0.5–1.1 cm wide, round or slightly concave at apex, base round or cuneate, with dense gray hairs on both surfaces; stipules triangular-lanceolate, brown, dry membranous, acuminate at apex, 3–7 mm long, covered with gray hairs; petioles subequal to or slightly longer than leaves; leaf axes pubescent. Racemes 10–24 cm long, axillary, almost double the length of leaves, rachis and common peduncles short-villose, with flowers 8 to ca. 20. Flowers alternate, 1.0–1.3 cm long, pendulous; pedicels 1–2 mm long; bracts

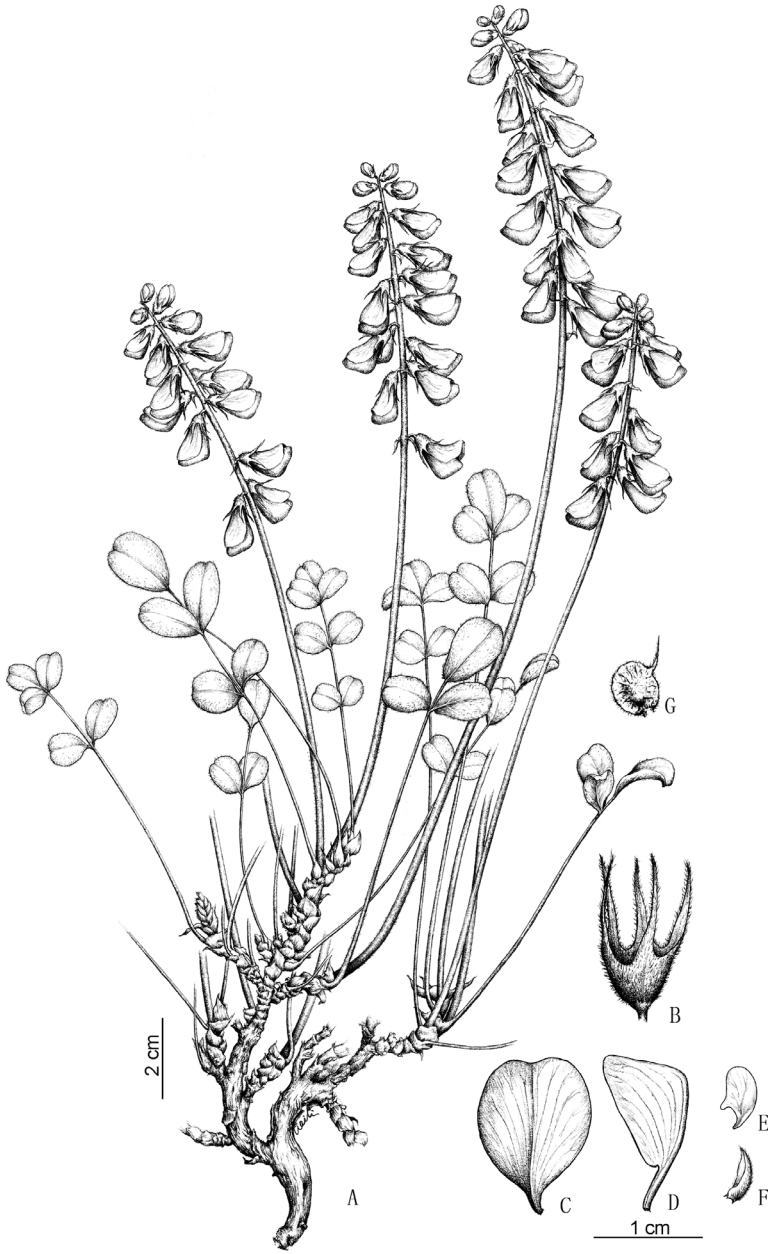


Fig. 1. *Hedysarum jaxartucir-des* (from holotype, drawn by Aili Li). — **A:** Habit. — **B:** Calyx. — **C:** Standard. — **D:** Keel. — **E:** Wing. — **F:** Bract. — **G:** Pod.

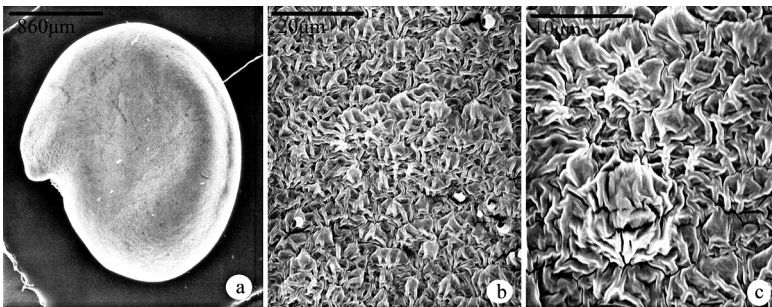


Fig. 2. *Hedysarum jaxartucir-des* (from holotype). Seed ultrastructure morphology under SEM. — **A:** General view of seed. — **B and C:** Seed surface.

Table 1. Morphological comparison of *Hedysarum jaxartucirdes* and *H. ferganense*.

	<i>H. jaxartucirdes</i>	<i>H. ferganense</i>
Corolla	reddish; wings semi-circular or auriform, 1/3 of length of standard or slightly more; keels subequal to or slightly longer than standard	lilac-violet; wings linear, 3/4 of length of standard; keels subequal to or shorter than standard
Leaflet	5–9; 9–20 × 5–11 mm	7–13; 6–8 × 2–6 mm
Pod	1–2-loculed	2–3-loculed

oval-lanceolate, brown, 4–5 mm long, exterior short-villose; calyx short campanulate, 6–7 mm long, tube villose, lobes linear-subulate, ca. 2–2.5 times longer than tube, both interior and exterior short-villose; corolla roseous, standard obovate, 14–15 mm long, apex round, slightly concave, wings almost semicircular or auriform, 1/3 or slightly longer than 1/3 of standard, keels subequal to or slightly longer than standard; ovary hairy. Pods 1–2-loculed, loments almost orbicular, 4–5 mm in diameter, inflated at both sides, short-villose, spineless, with reticulate ribs. Flowering and fruiting in August.

SEM (Hitachi S-800) observations on the seed ultrastructure: shape reniform (Fig. 2A), hilum small, at upper part of seed. Seed coat sculpture mainly cerebelloid (Fig. 2B and C), highly irregular, cell wall sinuate and without ornamentation.

The species is only known from its type locality in Xinjiang, China. It is morphologically close to *H. ferganense*, which is distributed in N Xinjiang and additionally in Kazak-

stan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, but differs mainly in corolla color and shape, size and numbers of leaflets and locule number of pods (Table 1).

Acknowledgements

I thank Dr. Zhang Shu-ren for his valuable comments on the manuscript and Ms. Li Ai-li for drawings, both from Botanical Institute of the Chinese Academy of Sciences. The study was supported by the National Natural Science Foundation of China (project No. 30370103).

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