

Astragalus hekmat-safaviae (Fabaceae), a new species from Iran

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Astragalus hekmat-safaviae F. Ghahremani. *sp. nova* (Fabaceae) is described and illustrated in line drawings. It is endemic to the Khorassan province of eastern Iran. The morphological characters (bifurcated trichomes, connate stipules, imparipinnate leaves, few leaflets, campanulate-tubular calyx) support a placement in *Astragalus* sect. *Ammodendron*, and the species appears to be most closely related to *A. badghysi*.

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

Astragalus sect. *Ammodendron* contains shrubs or subshrubs that often lose their leaves with age. The stipules are connate, the inflorescence is usually lax and short-pedunculate, the calyx is usually campanulate or nearly so, and not inflated at fruiting; the fruit is bilocular and coriaceous.

The section was originally established by Bunge (1868) to accommodate 19 species, but now, with the species described here, it contains a total of 62 species. The majority of the species in this section are desert plants distributed in Middle Asia, Iran, and Afghanistan (Ghahremaninejad & Gaskin 2004).

***Astragalus hekmat-safaviae* F.**
Ghahremani., *sp. nova* (Figs. 1 and 2)

A. hekmat-safaviae proximo est *A. badghysi*, sed differt habitu humilior (usque ad 10 cm, nec 15 cm), peduncululi longiori, caudex brevior (0.5–3

cm, nec 5–7 cm), et stipuli breviori (0.5–2 mm, nec 2–2.5 mm).

TYPE: Iran. Khorassan Province: Km 64 Mashhad to Torbat-e-Heydarieh, Robat-Sefid, 1650 m, 26.V.1997 Hojjat & Zangoee 28706 (holotype FUMH).

Plants 8–10 cm tall, caespitose, vested with white and black bifurcate hairs. Caudex stout, up to 20 mm in diameter, with short, thick branches. Stems 0.5–3 cm long, very densely covered with appressed, medifixed white hairs ca. 0.6 mm long. Stipules 0.5–2 mm long, adnate to petiole high up, vaginate-connate behind stem up to top, membranous, densely appressed-hairy. Leaves imparipinnate, 1–2 cm long, with a densely hairy petiole 2–3 mm long. Leaflets in 1–2 pairs, narrowly obovate, 6–15 × 1–2.5 mm, obtuse, on both sides densely covered with medifixed, appressed hairs ca. 0.8 mm long. Peduncles 1.5–5 cm long, slender, longer than leaves, hairy

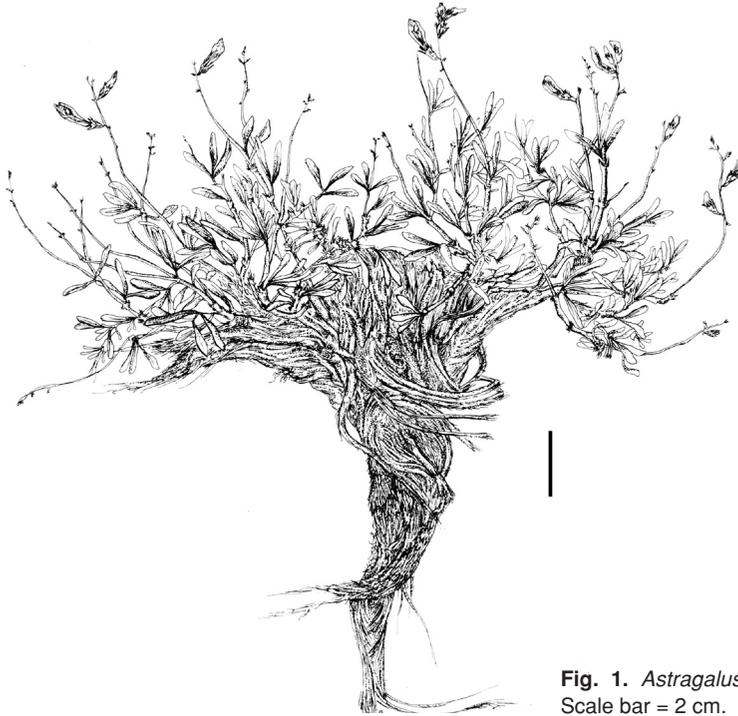


Fig. 1. *Astragalus hekmat-safaviae* (from holotype). Scale bar = 2 cm.

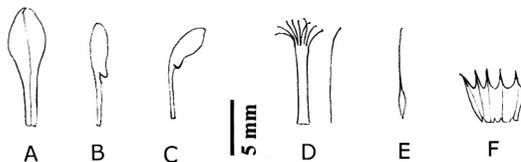


Fig. 2. *Astragalus hekmat-safaviae* (from holotype). — A: Standard. — B: Wing. — C: Keel. — D: Stamen. — E: Pistil. — F: Calyx.

similar to stem. Racemes loosely 3–7-flowered, 1.5–3.5 cm long. Bracts membranous, ovate, 0.5–0.8 mm long, predominantly black-ciliate at margins. Pedicels 0.5–1 mm long, with white and black hairs. Bracteoles wanting. Calyx 4–6 mm long, shortly campanulate-tubular, densely covered with symmetrically to asymmetrically bifurcate, \pm flexuose, subappressed black hairs 0.5–0.8 mm long and with strongly asymmetrically bifurcate, somewhat longer white hairs; calyx teeth subulate, ca. 2 mm long. Petals violet when dry, glabrous. Standard ca. 12 mm long; limb ca. 4.5 mm wide, rhombic-elliptic, with a rather wide and long claw. Wings ca. 10 mm long; limbs narrowly oblong, rounded, 5–5.5 \times 1.5–2 mm; auricle 0.5–0.7 mm long, claw ca. 5 mm long. Keel 9 mm long; limbs obliquely ellip-



Fig. 3. Type locality of *Astragalus hekmat-safaviae* in Iran.

tic, with widely curved lower edge and slightly curved edge, subacute, 4–5 \times 2–2.5 mm; auricle 0.5 mm long, claw 5 mm long. Ovary sessile, linear, 2.5–2.7 \times 0.6 mm, sparsely white-hairy; style 6–6.3 mm long, glabrous. Stamen-tube truncate at mouth, 9–11 mm long, free portion 2–3 mm long. Legumes unknown. Flowering May–June.

The specific epithet is in honour of the Iranian botanist, Mrs. Hekmat Safavi (Mashhad, Iran).

Astragalus section *Ammodendron* has its center of diversity in the Turkestanian floristic province of the Irano-Turanian region, with vast distribution in the Armeno-Iranian province of the region (Takhtajan 1986). In Iran, the psammophytic species of *Astragalus* sect. *Ammodendron* are concentrated mainly in xeric habitats of central, southern, and eastern parts of the country, and are distributed between 20 and 3400 m altitude. In the northern region, the species are more mesophile. Southern areas of Iran are near the extreme ranges of the taxon (Ghahremaninejad 2004a, 2004b).

Astragalus hekmat-safaviae is known only from the type locality (Fig. 3). There are now 20 species of *Astragalus* section *Ammodendron* known from Iran, 16 of them being endemic (Ghahremaninejad & Gaskin 2004). Morphologically the closest relative is *A. badghysi* (type LE!), which is distributed in Turkmenistan. *Astragalus hekmat-safaviae* differs from *A. badghysi* in having a shorter habit (up to 10

vs. up to 15 cm), longer peduncle, shorter stem (0.5–3 vs. 5–7 cm), and shorter stipules (0.5–2 vs. 2–2.5 mm).

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