

Astragalus subhanensis (Fabaceae), a new species from Turkey

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A new species of *Astragalus* sect. *Stereothrix* (Fabaceae) is described from Turkey: *Astragalus subhanensis* F. Ghahremani. & L. Behçet. It is endemic to Turkey and related to *A. barbatus* Lam.

Key words: *Astragalus*, Fabaceae, new species, *Stereothrix*, taxonomy, Turkey.

Astragalus is the largest plant genus in Turkey, with nearly 440 species in 62 sections (Ekici & Aytaç 2001), and 204 endemic taxa (Akan & Civelek 2001). Turkey is one of the centers of diversity of the genus. In this paper a new species is described of *Astragalus* sect. *Stereothrix*.

***Astragalus subhanensis* F. Ghahremani. & L. Behçet, sp. nova** (Figs. 1 and 2)

Species Astragalo barbatus Lam. affinis, sed differt foliis 10–15-jugis (nec 6–8-jugis), leguminibus 13.5–15 (nec 8–10) mm longis, stipulis 12–20 (nec 5–8) mm longis, acaulibus (nec caule ad 15 cm longis).

TYPE: Turkey. Van Province, East Anatolia, B9 Bitlis: Adilcevaz, Subhan Dağı [Subhan Mt.], Sote Yaylasi [highland], east of Çanakyayla village, steppe, 2300 m, 21.VI.1987 L. Behçet 41 (holotype FAR; isotypes FAR, VANF).

Herbaceous perennial, acaulescent, ca. 17–22 cm tall, vested with simple (basifixed) hairs (merely white). Stipules 12–20 mm long, partly (1/4–1/2) adnate at base to petiole, free (nonconnate), yellow membranous, densely hairy, free part long-lanceolate. Leaves imparipinnate, 13–20 cm long, petiole and rachis hirsute; petiole nearly 1/3 as long as leaves; leaflets in 10–15 pairs, oblong to oblong-elliptic, acute, 10–21 × 4–8 mm, covered with hairs on both sides. Peduncle 10–15 cm long, hirsute. Inflorescence spherical to short-cylindric, dense, 8–14-flowered. Bracts lanceolate, 12–20 mm long, 2–2.5 mm wide, longer than tube to (rarely) equal to calyx, covered with long hairs. Bracteoles wanting. Pedicel 1–2 mm long, covered with hairs. Calyx cylindric to cylindric-campanulate, 17–23 mm long, not inflated in fruit, covered with long hairs; calyx teeth 10–15 mm long, equal to tube or 3/2 of it. Corolla when dry yellow-brown or yellow-green; standard 19–26 mm long,

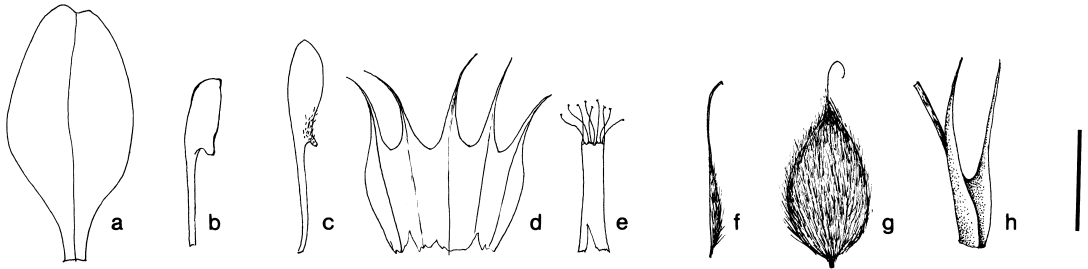


Fig. 1. *Astragalus subhanensis* (from holotype). — a: Standard. — b: Keel. — c: Wing. — d: Calyx. — e: Stamens. — f: Pistil. — g: Fruit. — h: Stipules. — Scale: 1 cm.



Fig. 2. Holotype of *Astragalus subhanensis* (photo by S. Parsapajouh).

limb elliptical to oblong-elliptical, emarginate, 11–13 mm wide, non-ligulate; wing 17–23 mm long, limb elliptical-oblong, obtuse, 10–11 mm long, 4–4.5 mm wide, ligule 1–1.2 mm long, claw 7–12 mm long, margins hairy; keel 13–17 mm long, limb 6–7 mm long, 3.5–4 mm wide, ligule 0.7–0.9 mm long, claw 7–10 mm

long. Stamens 14–16 mm long, free portion 3–4.5 mm long. Pistil 12.5–17 mm long; ovary sessile, 6–9 mm long, densely covered with long hairs, 10-ovulate; ovules reniform; style 5–8 mm long, glabrous. Pod sessile, elliptical, acute, 13.5–15 mm long, 6–7 mm broad, terminating in a short beak (1–2 mm long), densely covered with

woolly hairs, unilocular. Flowering and fruiting in June–July.

Astragalus subhanensis is endemic to Turkey and was collected in the province of Van by one of the authors. It is separated from the other species of the section by the presence of a few hairs on the wings. The closest relative of *A. subhanensis* is *A. barbatus* (Rechinger *et al.* 1961), but the former differs in being acaulescent (*vs.* with a stem 10–15 cm long), longer stipules (12–20 *vs.* 5–8 mm), 10–15 (*vs.* 6–8) pairs of leaflets, longer fruit (13.5–15 *vs.* 8–10 mm), and a longer bract.

The list of Turkish species of *Astragalus* sect. *Stereothrix* given below is based on Chamberlain and Matthews (1969), Tan and Sorger (1987), Davis *et al.* (1988), Lock and Simpson (1991), Podlech (1999), and Guner *et al.* (2000). An asterisk means that the species is endemic to the region.

1. *A. barbatus* Lam.
2. *A. brachypetalus* Trautv.
3. *A. capito* Boiss. & Hohen.
4. *A. chamberianianus* Sümbül*
5. *A. coodei* D.F. Chamb. & V.A. Matthews*
6. *A. hakkariensis* Podlech*
7. *A. leucothrix* Freyn & Bornm.*
8. *A. nabelekii* Czecczott*
9. *A. nanus* DC.
10. *A. sorgerae* Hub.-Mor. & D.F. Chamb.*
11. *A. sparsipilis* Hub.-Mor. & D.F. Chamb.*
12. *A. sphaeranthus* Boiss.

13. *A. stridii* Kit Tan*

14. *A. subhanensis* F. Ghahremani. & L. Behçet*

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References

- Akan, A. & Civelek, S. 2001: *Astragalus aytatchii* (Fabaceae), a new species from Anatolia, Turkey. — *Ann. Bot. Fennici* 38: 167–170.
- Chamberlain, D. F. & Matthews, V. A. 1969: *Astragalus* L. — In: Davis, P. H. (ed.), *Flora of Turkey and the Aegean Islands* 3: 49–254. Univ. Press, Edinburgh.
- Davis P. H., Mill, R. R. & Tan, K. (eds.) 1988: *Flora of Turkey and the East Aegean Islands* 10 (Supplement I). — Univ. Press, Edinburgh.
- Ekici, M. & Aytaç, Z. 2001: *Astragalus dumanii* (Fabaceae), a new species from Anatolia, Turkey. — *Ann. Bot. Fennici* 38: 171–174.
- Guner, A., Ozhatay, N., Ekim, T. & Baser, K. H. C. (eds.) 2000: *Flora of Turkey and the East Aegean Islands* 11 (Supplement II). — Univ. Press, Edinburgh.
- Lock, J. M. & Simpson K. 1991: *Legumes of West Asia, a check-list*. — Royal Botanic Gardens, Kew.
- Podlech, D. 1999: New *Astragalus* and *Oxytropis* from North Africa and Asia, including some new combinations and remarks on some species. — *Sentnera* 6: 135–174.
- Rechinger, K. H., Duffer, H. & Patzak, A. 1961: *Sirjaevii fragmenta Astragalologicae, XIII–XVII* [sect. *Stereothrix*]. — *Sitz. Öst. Akad. Wiss. Math. Nat. Kl.* 170–2: 29–34.
- Tan, K. & Sorger, F. 1987: More new *Astragali* from Turkey. — *Aliso* 11: 619–629.