

Astragalus duranii (Fabaceae), a new species from Central Anatolia, Turkey

Ergin Hamzaoğlu¹ & Latif Kurt²

¹⁾ Kirikkale University, Faculty of Science and Literature, Department of Biology, Kirikkale, Turkey

²⁾ Ankara University, Faculty of Science, Department of Biology, Ankara, Turkey

Received 15 August 2001, accepted 31 October 2001

Hamzaoğlu, E. & Kurt, L. 2002: *Astragalus duranii* (Fabaceae), a new species from Central Anatolia, Turkey. — *Ann. Bot. Fennici* 38: 89–91.

Astragalus duranii E. Hamzaoğlu & L. Kurt *sp. nova* (Fabaceae) is described from Central Anatolia (Yozgat) in Turkey. It belongs in the section *Proselius* Bunge and is related to *A. czorochensis* Charadze, from which it mainly differs in its very long legumes.

Key words: *Astragalus*, Fabaceae, taxonomy

Introduction

A peculiar *Astragalus* specimen with fruit was collected during the floristic study of the Kazankaya canyon, Yozgat, carried out in 1999 and 2000. The area was revisited in 2001 and some flowering specimens were collected. These specimens were examined in the herbaria of ANK, GAZI, HUB and ADO, and compared with the descriptions of species of *Astragalus* in Schischkin (1965), Chamberlain and Matthews (1970), Townsend and Guest (1974), Zohary (1987), and Aytac (2000). The specimens represent a species new to science.

Astragalus duranii E. Hamzaoğlu & L. Kurt, *sp. nova* (Figs. 1 and 2)

Affinis *A. czorochensis* Charadze *sed stipula* 6–8 mm longa (non 8–9 mm), *vexillo* 21–23 mm longo (non c. 25 mm), *legumine* 30–44 mm longo (non 16–21 mm) *et rostrumo* 4–6 mm longo (non c. 3 mm) *differt*.

HOLOTYPE: Turkey. A5 Yozgat: Aydıncık, Kazankaya–Alan koyu arası 7. km, 1020 m, 10.VI.2001 E. Hamzaoğlu 2690 (ADO; isotypes GAZI, ANK, HUB and Hrb. Yıldırımli).

PARATYPE: Turkey. A5 Yozgat: Kazankaya–Alan koyu arası yol kenarlari, 1000 m, 24.VI.2000 E. Hamzaoğlu 2521 (ADO).

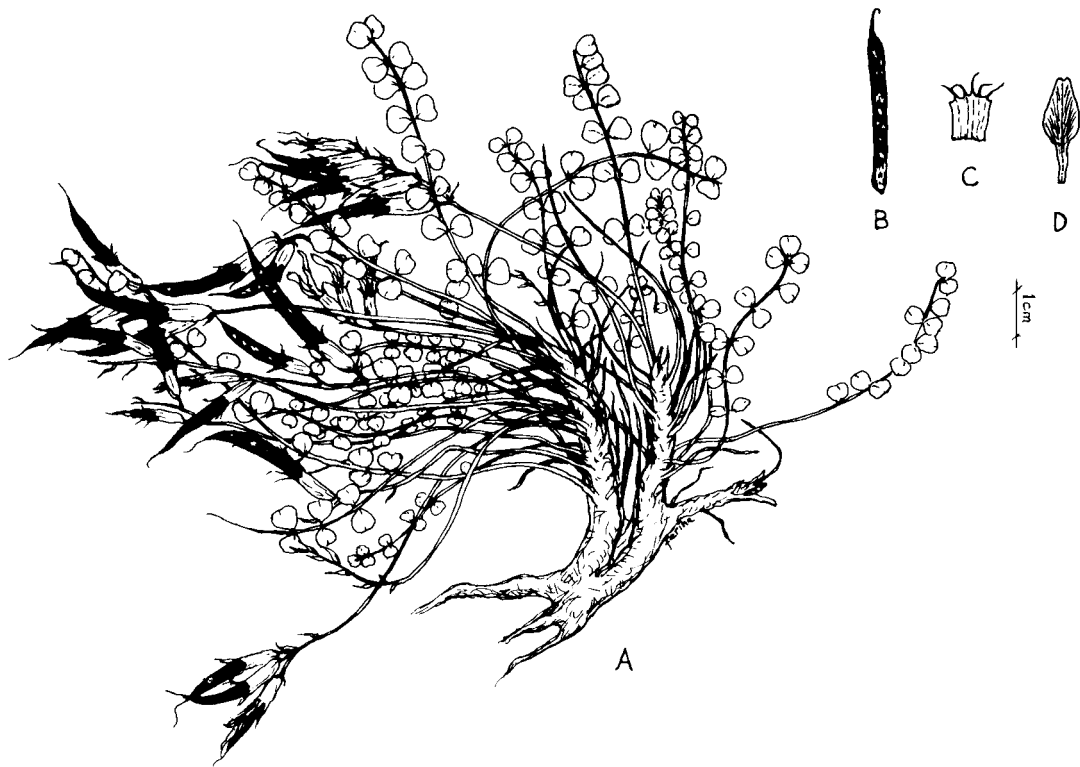


Fig. 1. *Astragalus duranii*. — A: Habit. — B: Fruit. — C: Calyx. — D: Standard. (Same scale bar for all elements.)

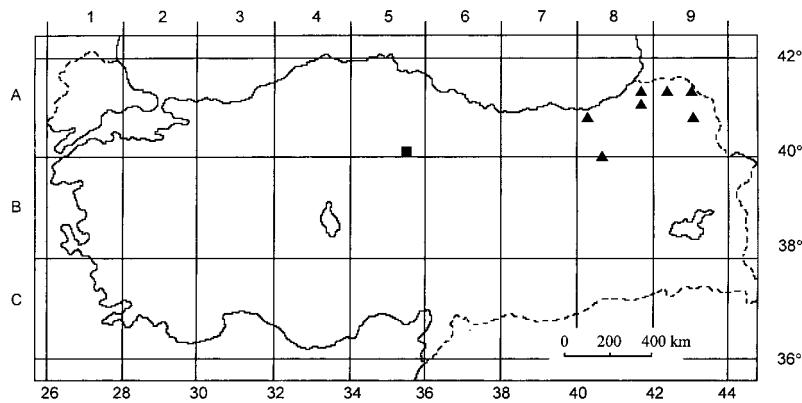


Fig. 2. Distribution of *Astragalus duranii* (■) and *A. czorochensis* (▲) in Turkey.

Mat-forming, 6–10 cm, scapose perennial herb with a woody base. Leaves oblong to oblong-lanceolate in outline, 5–10 cm long, petioles 1–3 cm, leaflets 3–6 mm long, broadly obovate to orbicular, sparsely adpressed bifurcate-hairy below, glabrous above, glaucous, obtuse, 5–10 paired; stipules 6–7 mm long, triangular-lanceolate. Peduncles 2.5–6.5 cm. Inflo-

rescence a 4–9-flowered raceme. Pedicels 3–4 mm. Bracts 3–4 mm long, lanceolate. Bracteoles 2.5–4 mm long, linear to linear-lanceolate. Calyx 12–16 mm long, tubular, sparsely hairy, hairs white, adpressed, bifurcate, teeth 4–6 mm long, linear. Corolla purple, standard 21–23 mm long, attenuate above, lamina ovate-lanceolate, 13–16 mm long, bilobed at apex, claw 7–8 mm

Table 1. Differences between *Astragalus duranii* and *A. czorochensis*.

| Characters | <i>Astragalus duranii</i> | <i>Astragalus czorochensis</i> |
|---|--|---|
| Leaflet length | 3–6 mm | 5–8 mm |
| Stipule length and shape | 6–7 mm triangular-lanceolate | 8–9 mm lanceolate |
| Number of flowers in inflorescence | 4–9 | 3–5 |
| Bract length | 3–4 mm | 2–3 mm |
| Colour of calyx hairs | white | black or white |
| Calyx tooth length | 4–6 mm | ca. 4 mm |
| Standard length | 21–23 mm | ca. 25 mm |
| Legume length, shape, attitude and colour | 30–44 mm oblong erect to erect-patent with dark blotches | 16–21 mm lanceolate ± spreading without dark blotches |

long; wings 15–17 mm long, lamina oblong, claw 8–10 mm long; keel 13–14 mm long, claw 8–9 mm long. Legume 30–44 × 2.5–3 mm, oblong, laterally compressed, straight or slightly incurved, sparsely hairy, hairs white, adpressed, bifurcate; with dark blotches, erect to erecto-patent, 16–22 seeded; beak 4–6 mm long. Seeds compressed, reniform, ca. 2 mm broad, brown.

HABITAT AND LIFE FORM: Calcareous soils, *Quercus* openings and steppes, 1000–1020 m altitude, flowers and fruits May–June, chamaephyte.

DISTRIBUTION: Endemic, Irano-Turanian element.

Astragalus duranii is closely allied to *A. czorochensis* Charadze, an endemic of NE Anatolia. The differences are presented in Table 1.

ETYMOLOGY: This new species is named after Dr. Ahmet Duran, a celebrated Turkish botanist.

Representative specimens examined of *Astragalus czorochensis*. — **Turkey.** A8 Coruh: in rupestribus ad ripam dextram fl. Czoroch (Coruh Cayi) infra Artvin, IV.1908 *Woronow 819* (holotype, TBI); A8 Coruh: nr. Artvin, Turkevicz 499; A8 Artvin: Borcka'dan Artvin'e 13 km, Coruh vadisi, 120 m, III.1983 *Guner 4654* (HUB); A8 Trabzon: Surmene, Koprubasi, Arpali koyu ustu, 2050 m, V.1983 *Guner 4931* (HUB); A8 Erzurum: c. 8 km above Ilica, Kackar group, 2400 m, *Cheese & Watson 215* (ANK); A9 Artvin: Savsat-Ardahan arasi, Lasat deresi mevki, 1700 m, V.1983 *Guner 4841* (GAZI); A9 Kars: Posof, Saricicek koyu, Gonulacan ormani-

Dogrular koyu yaylasi, Posof merkez yayla yolu boyunca, 1900–2200 m, V.1986 *Demirkus 3465* (GAZI).

Acknowledgements

We thank the Curators of the Herbaria Ankara University (ANK), Gazi University (GAZI) and Hacettepe University (HUB), who allowed us to study their *Astragalus* specimens. We are also indebted to Kirikkale University for financial support and to Dr. Y. Menemen for reading the manuscript.

References

- Aytac, Z. 2000: *Astragalus* L. — In: Guner, A., Ozhatay, N., Ekim, T. & Baser, K. H. C. (eds.), *Flora of Turkey and the East Aegean Islands* 11: 79–88. Edinburgh Univ. Press, Edinburgh.
- Chamberlain, D. F. & Matthews, V. A. 1970: *Astragalus* L. — In: Davis, P. H. (ed.), *Flora of Turkey and the East Aegean Islands* 3: 49–254. Edinburgh Univ. Press, Edinburgh.
- Schischkin, B. K. 1965: *Astragalus* L. — In: Schischkin, B. K. (ed.), *Flora of the USSR* 12: 1–710. Israel Prog. Sci. Trans., Jerusalem.
- Townsend C. C. & Guest E. 1974: *Astragalus* L. — In: Townsend, C. C. & Guest, E. (eds.), *Flora of Iraq* 3: 231–442. Min. Agric. Agr. Reform Rep. Iraq, Baghdad.
- Zohary, M. 1987: *Astragalus* L. — In: Zohary, M. (ed.), *Flora Palaestina* 2: 54–83. Israel Acad. Sci. Human., Jerusalem.