

Astragalus pseudopinetorum (Fabaceae), a new species from Turkey

Barış Özüdoğru, Sadık Erik & Fatemeh Taeb*

Department of Biology, Faculty of Science, Hacettepe University, 06800 Beytepe, Ankara, Turkey
(*corresponding author's e-mail: taeb_fatemeh@yahoo.com)

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Astragalus pseudopinetorum Taeb, Özüdoğru & Erik *sp. nova* (Fabaceae), endemic to the Hakkâri province of E Turkey, is described and illustrated. It belongs to *A. sect. Caprini* and is morphologically related to *A. kamelinii*. A characteristic feature is the whole plant being glabrous, with just a few scattered white hairs on the rachis and pedicels.

Astragalus with about 3000 species is considered the largest genus within angiosperms (Podlech 1986, Zarre & Podlech 1997). Iran is the first and Turkey is the second diversity centre of the genus. In Turkey there are about 445 species, of which 224 are endemic. They can be attributed to 62 sections (Chamberlain & Matthews 1970, Davis *et al.* 1988, Aytaç 2000). In the first complete revision of the Old World *Astragali* presented by Bunge (1868/1869) *Astragalus* sect. *Caprini* (syn. sect. *Myobroma*) was placed in subgen. *Phaca*. The section *Caprini* is a taxonomically difficult group with a large number of closely related species (Townsend 1974).

The section *Caprini*, originally established by De Candolle (1825) with 22 species, has been expanded considerably later on. Bunge (1868/1869) recognized 75 species, Podlech (1988) recognized 230 species, and after recent investigations by D. Podlech (unpubl. data) there are now 273 species in the section. Here we describe a further species in the sect. *Caprini*.

***Astragalus pseudopinetorum* Taeb, Özüdoğru & Erik, *sp. nova* (Fig. 1)**

A. pseudopinetorum habitu *A. kamelinii* Podlech similis sed differt ab eo specie stipulis 3–6 mm longis, petiolo breviter adnatis (nec 2–4 mm longis petiolo ad medium adnatis), foliolis late ellipticis ad obovatis, 2–8 × 1–6 mm, obtusis ad retusis (nec orbicularibus ad triangulari-obcordatis, 2–4 × 1.5–4 mm, alte emarginatis), bracteis 2–5 mm (nec 1–2 mm) longis, vexillo 14–18 mm (nec 12–14 mm) longis.

TYPE: Turkey. C10 Hakkâri: Beytüşşebap-Uludere, Tantanin Mountains, ca. 2500 m, 25.VII.1974 M. Rix 2332 (holotype HUB).

ETYMOLOGY: False *A. pinetorum*, growing together with that species, which is very common in Turkey.

Plants 2–4 cm tall, acaulescent, glabrous, sometimes with few scattered white hairs on rachis and pedicels. Stipules membranous, 3–6 mm long, narrowly triangular, shortly adnate

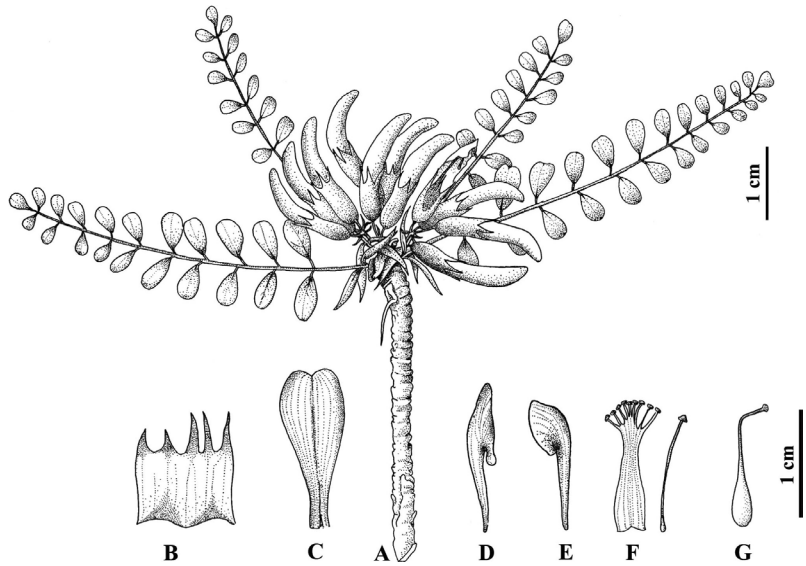


Fig. 1. *Astragalus pseudopinetorum* (from the holotype). — **A:** Habit. — **B:** Calyx. — **C:** Standard. — **D:** Wing. — **E:** Keel. — **F:** Stamens (diadelphous). — **G:** Pistil.



Fig. 2. Distribution of *Astragalus pseudopinetorum* (■) in Turkey and of *A. kamelinii* (●) in Uzbekistan.

to petiole. Leaves 2–7 cm long; petiole 0.7–1 cm long, slender. Leaflets in 7–16 pairs, elliptic to obovate, retuse, 2–8 × 1–6 mm. Racemes sessile or subsessile, 4–7-flowered. Bracts membranous, lanceolate, 2–5 mm long. Pedicels 1–4 mm long. Calyx 8–11 mm long, tubular; teeth narrowly triangular, 2–4 mm long. Petals yellow. Standard 14–18 mm long; blade 6.5–7 mm wide, elliptic, emarginate, with a short claw. Wings 12–14 mm long; blades narrowly oblong, rounded, 6–7 × 2.5 mm; auricle ca. 1 mm, claw 7–8 mm. Keel 11–12 mm long; blades elliptic-triangular, obtuse, ca. 5 × 3 mm; auricle short, claw 6–7 mm. Stamen-tube strongly obliquely cut at the mouth, ending in a curved line. Ovary sessile. Legumes (immature) ellipsoid, with a beak 4–7 mm long; valves thin, brown.

Astragalus pseudopinetorum is known only from the type specimen collected in the E of

Turkey (Fig. 2). It is closely related to *A. kamelinii* (endemic to Uzbekistan), from which it differs in some characters (Table 1).

The members of sect. *Caprini* are distributed in south, central and east Europe to middle Asia, Siberia, Mongolia and China, north Africa, Turkey, Near East to Pakistan and north India. According to Podlech (1988, 1999), *A. sect. Caprini* is one of the larger perennial sections. Iran with 171 species (91 endemic) is the centre of diversity (Podlech 1999), and some diversity of species is found also in Turkey (16 species) (Chamberlain & Matthews 1970), moreover, some new species and subspecies were added to the list of sect. *Caprini* (Hamzaoglu 2003, Akpulat & Çelik 2007).

Recent research showed that some characters, such as hair micromorphology, are important in the classification of *Astragalus*, especially

Table 1. Morphological comparison of *A. pseudopinetorum* and *A. kamelinii*.

	<i>A. pseudopinetorum</i>	<i>A. kamelinii</i>
Calyx length	8–11 mm	7–8 mm
Standard length	14–18 mm	12–14 mm
Raceme	4–7 flowered	1–4 flowered
Indumentum	glabrous, scattered hairs on rachis and pedicels	completely glabrous
Leaves length	2–7 cm	1–4 cm
Leaflets	7–16 paired	10–12 paired
Leaflets size	2–8 × 1–6 mm	2–4 × 1.5–4 mm
Stipules	3–6 mm	2–4 mm
Bracts	oblong-acute, 2–5 mm long	lanceolate, 1–2 mm long

in the spiny species (Zarre 2000, 2003, Zarre & Podlech 2001a, 2001b). These characteristic hair features were applied in the latter study on phylogeny of the annual species of *Astragalus* distributed in the Old World (cf. Taeb *et al.* 2007). Based on the indumentum, a group of 48 species was segregated and attributed to sect. *Caprini*, having a glabrous habit.

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