



Taxonomic notes on the genus *Astragalus* (Fabaceae) in Iran, with the description of a new species

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Abstract

Astragalus jaldiyanensis is described and illustrated as a new species from Iran. The new species belongs to *Astragalus* section *Hymenostegis*. It is closely related to *A. assadabadensis*, which is a rare species in the subalpine areas of Western Iran. Geographically *A. jaldiyanensis* is well separated from *A. assadabadensis* as it occurs in the northwest of Iran. The habit, shape of the calyx and petals are very similar in both species, but the new species differs sufficiently from its relative by having white flowers (vs. yellowish white), leaflets in 8–9 (vs. 4–5) pairs, leaflet size 6–8 × 1.5–2 mm (vs. 15–25 × 2–2.5 mm), keel length 12–13 mm (vs. ca. 16 mm) and peduncle length 7–9 cm (vs. ca. 5 cm). The relationships between the species are discussed. In addition, *A. ranjbarii* of *Astragalus* section *Dissitiflori* is reduced to synonymy of *A. ghahremaninejadii*.

Key words: *Astragalus* sect. *Hymenostegis*, synonymy, taxonomy

Introduction

Astragalus L. is a large genus belonging to the tribe Astragaleae of Papilionoideae in the Fabaceae (Ranjbar & Karamian 2003a), occurring mostly in mountainous regions of Europe, Asia, and North America, and is the most species-rich and diverse genus in Central Asia and South West Asia (Polhill 1981, Yakovlev *et al.* 1996, Ranjbar & Karamian 2003a). In terms of species number, *Astragalus* may be the largest genus of vascular plants, represented by a total of ca. 2500 taxa (Lock & Simpson 1991, Yakovlev *et al.* 1996, Mabberley 1997).

This work follows previous studies conducted on leguminous species in Iran (Podlech & Maassoumi 2003, Ranjbar & Karamian 2003b, 2004, Karamian & Ranjbar 2005a, 2005b, Ranjbar *et al.* 2007) and aims to increase the knowledge about patterns of morphological variation in *A.* section *Hymenostegis* Bunge in Iran.

The species of *A.* section *Hymenostegis* are cushion forming plants, mostly with paripinnate leaves and inflated fruiting calyces. As the section with 46 species in Iran is one of the most heterogeneous of spiny *Astragali*, it has been revised several times in its entirety (Bunge 1868, 1869, Boissier 1872, Rechinger 1958, Zarre & Podlech 1996) and for the area of Flora Iranica (Podlech *et al.* 2001).

Moreover, my field research in Azarbaijan Garbi Province in 2009 led to the discovery of a different population of a related taxon occurring together with populations of *A. chrysostachys* Boiss. near Oshnavieh. My studies on living material and herbarium specimens showed that this new taxon, which occurs exclusively in the Jaldiyan submountains, is especially close to *A. assadabadensis* F.Ghahrem. & Podlech and *A. chrysostachys*. However, its morphological differences were enough for treating it as a new distinctive species.