

ASTRAGALUS ANDABADENSIS (FABACEAE), A NEW SPECIES OF ASTRAGALUS SECT. INCANI FROM ZANJAN PROVINCE, IRAN

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Astragalus andabadensis (Fabaceae) an endemic to Zanzan province, Iran is described here as a new species. It is placed in the section *Incani* DC. due to its medifixed hairs, free stipules, and bibracteolate flowers, and it appears to be most closely related to *A. latifolius* Lam. An illustration of the species is provided.

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Key words. *Astragalus andabadensis*, Fabaceae, new species, Iran, sect. *Incani* DC., subgenus Cercidothrix.

گونه جدید *Astragalus andabadensis* (Fabaceae) از بخش *Incani* از استان زنجان، ایران

فرخ قهرمانی نژاد، دانشیار گروه زیست شناسی دانشگاه تربیت معلم.

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گونه *Astragalus andabadensis* (Fabaceae) انحصاری استان زنجان به عنوان گونه جدید شرح داده می شود. این گونه به واسطه دارا بودن کرک های میان چسب، گوشوارک آزاد و گل هایی با دو براکتول در سبکیون sect. *Incani* DC. قرار می گیرد. این گونه ارتباط نزدیکی با گونه *A. latifolius* Lam. دارد. تصویر گونه نیز ارائه شده است.

Introduction

The genus *Astragalus* L. (GAVAN in Persian) with nearly 3000 species is probably the largest genus of flowering plants (Lock & Simpson 1991). Iran, with nearly 800 species, is one of the most important of its center of diversity (Maassoumi 1998). As we know bifurcating hair *Astragalus* species are located in subgenus *Cercidothrix* Bunge (Bunge 1868). This subgenus includes nearly 900 species in the Old World. It is characterized by perennial habit and presence of bifurcate hairs.

In this paper a new bifurcated hair species is introduced from *Astragalus* section *Incani* DC. from Zanzan province, Iran. This section originally established by Aug. Pyramo De Candolle (1825). The centre of diversity of this section is the Armeno-Iranian floristic province of the Irano-Turanian region (Takhtajan, 1986). Sect. *Incani*, among subgenus *Cercidothrix* in Iran, is the largest section with the highest endemism.

Astragalus andabaddensis Maassoumi, Bagheri & Ghahremaninejad., sp. nov. e sect *Incai* DC. (Fig. 1).

Similis ab *A. latifolius* Lam. sed differt floribus violaceis vel purpureis (nec luteis), foliis ad superficiem dense symetrice appresse pilosis (nec sparse pilosis), calyce purpurascenti (nec lutescenti), legumine c. 30 mm longo, arcuato (nec 40-80 mm longo), bracteis c. 10 mm longis (nec 2-5 mm), bracteolis pedicellis adnatis (nec calyce adnatis).

Plant c. 23 cm tall, covered with appressed symmetric medifixed hairs up to 0.7 mm long. Caudex c. 10-20 mm in diameter, unbranched, densely covered with remnants of old leaves. Stipules triangular, c. 10 mm long, adnate to the petiole for 4 mm, densely appressed hairy. Leaves 8 cm long; petiole c. 3.5 cm long, loosely to rather densely hairy, articulated below the lime; leaflet only 1, ovate to orbicular, cuneate at the base, rounded at the apex, 60-70 x 65 mm, on both sides densely hairy. Peduncle 5-11 mm long, loosely to densely white hairy, upper part glabrescent; racemes densely many flowered, c. 25 flowered, later elongated to 12 cm long. Bracts whitish, broadly triangular, c. 10 mm long, sparsely with white cilia or glabrous.



Fig. 1. *Astragalus andabaddensis* (holotype).

Pedicels erect, c. 2 mm long, with black and white hairs. Bracteole linear. Calyx 13-15 mm long, purplish, tubular, obliquely cut at the mouth, with 5 elevated main nerves, covered sparsely with white hairs, later becoming glabrous; tube on the inner side at the margin hairy; teeth unequal, subulate, c. 5-6 mm long on inner side white hairy. Corolla pale violet. Standard 22 mm long, limb 8-9 mm wide, obovate to elliptic or widely oblong, somewhat constricted below the middle, at the apex slightly incised, at the base angularly narrowed into the short, cuneate claw. Wing 17 mm long; limb broadly oblong, slightly dilated toward the apex, notched, 9 x 4 mm; auricle 1-1.5 mm long; claw 9-10 mm long. Keel 16-17 mm long; limb obliquely obovate, oblong, at the apex subacute, 7 x 3 mm; auricle c. 1 mm long; claw c. 8 mm long. Ovary linear, sessile or shortly stipitate, glabrous. Legume sessile, erect, arcuate or falcate, c. 30 mm long, 2.5 mm high and 3.5 mm wide, rounded ventrally with a prominent nerve, grooved dorsally, tapering into a beak c. 5 mm long, covered densely with symmetrically medifixed, appressed white hairs, becoming glabrous, incompletely bilocular.

Typus. Iran, Zanzan province, 60 km from Zanzan to Mahneshan, Andabad, 1770 m, 24.05.2009, A. Bagheri 6776 (holotypus TARI; isotypus FAR).

Additional specimens seen (paratypus). Iran, Zanzan province, 60 km from Zanzan to Mahneshan, Andabad, 1780 m, 24.05.2009, A. Bagheri 6778, 6779 [FAR]. -

60 km from Zanzan to Mahneshan, Andabad, 1800 m, 24.05.2009, A. Bagheri 6783 [FAR].

Flowering and fruiting time. May-June

This species has been known only from the type locality. Recently the type specimens were collected in the Zanzan province. However, the authors did not find any other specimens of it in any Iranian herbaria.

Morphologically, the closest relative of this species is *A. latifolius* Lam. *Astragalus andabadensis* differs from *A. glabellus* Podlech in having a shorter legume (30 not 40-80 cm long), longer bract (10 not 2-5 mm long), violet to purple corolla (not yellow), purple calyx (not yellow), leaflets densely hairy (not sparsely), and adhesion of bracteoles to pedicel (not to calyx).

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