

NOTES ON THE GENUS ASTRAGALUS SECT. ALOPECUROIDEI DC. IN IRAN

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In this work Sect. *Alopecuroidei* DC. in Iran is revised, six new species including: *A. arasbaranensis*, *A. latianicus*, *A. maabudii*, *A. ovalifoliolatus*, *A. sarzehensis* and *A. zarjabadensis* are described as new taxa for the science.

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مطالعاتی درباره جنس گون (*Astragalus*) از بخش *Alopecuroidei* در ایران

از: علی اصغر معصومی و مسعود رنجبر مبارکه

بخش *Alopecuroidei* DC. از گون‌های ایران مطالعه می‌شود. در این مطالعه گونه‌های: *A. maabudii*, *A. latianicus*, *A. arasbaranensis*, *A. zarjabadensis*, *A. ovalifoliolatus*, *A. sarzehensis*, به عنوان گونه‌های جدید نامگذاری و شرح داده می‌شوند.

INTRODUCTION

Revision of the Iranian species of the sect. *Alopecuroidei* DC. according to the Iranian materials started in 1991. Identification of the numerous materials in two big herbaria (TARI & IRAN) was the main preliminary goal.

For solving the taxonomical complexities of this section we have examined seed coat structure and the chromosome number of several taxa. Also by comparison with type photos, several species became clear as the new taxa which are described. All the type materials are preserved in the Herbarium of Research Institute of Forests & Rangelands (TARI).

***Astragalus arasbaranensis* Maassoumi & Ranjbar, sp. nov.**

Differt ab *A. finitimus* Bge. floribus minoribus et stipulis longioribus, vexillo rectangulari (nec ovato bilobum), stylo glabro (nec ad medium hirto).

Plantae perennes, 50cm altae. Caulis erectis, glabris. Stipulae ad 35mm longae, herbaceis superioribus ovatis acutis, petiolo per 1-2mm adnate. Folia 7-20cm longa, petiolo ca. 2cm longo. Foliolis 6-9 jugis, lanceolatis acutis glaberrimis, 35mm longis

et 10mm latis. Inflorescentiae capitulis axillares, globosis, pedunculo Ca. 1-2cm longo. Bracteis linearibus hispidis, 13mm longis. Calyx Ca. 12mm longus, hirsutus campanulatus; dentibus subulatis, 6mm longis. Corolla glabra, flava. Vexillum ca. 17mm longum; lamina rectangularis. Alae ca. 17mm longae; lamina oblonga, antice rotundata; auricula ca. 3mm longa. Carina ca. 16mm; lamina triangularis. Ovarium sessile, dense pilosum, stylo glabro, ca. 15mm longo. Legumen ignotum.

Typus. Iran, Prov. Azarbayejan: Arasbaran Protected area, Savabi, 107 (holotypus TARI).

***Astragalus sarzehensis* Ranjbar, sp. nov.**

Differt ab *A. meridionalis* Bge. foliolis obovatis et longioribus, floribus minoribus, vexillo ovato apice emarginato (nec suborbiculato bilobum).

Plantae perennes, 75cm altae. Caulis erectus, densissime pilis brevissimis obtectus. Stipulae 7-14mm longae, membranaceae lanceolato-lineares, petiolo per 1-2mm adnatae. Folia 10-26cm longa, petiolo brevissimo, sicut rachis brevissime piloso. Foliola 5-8 juga, 22mm longa et ca. 10mm lata, utrinque dense brevissime

appresse pilosa. Inflorescentiae in axillis foliorum superiorum, rotundi-capitatae, 3cm diametro, pedunculis 3-4cm longis pilosis suffultae. Bracteae filiformes 13mm longae, pilosae. Bracteolae filiformes calycem aequantes. Calyx 20mm longus, late tubulosi-campanulatus, pilis densis 1-2mm longis obtectus, dentibus tubum aequantibus vel eo longioribus. Corolla glabra, ad puberula. Vexillum ca. 15mm longum; lamina ovata, apice emarginata. Ala ca. 15mm longa. Lamina oblonga, antice rotundata, basi auriculata; ca. 3mm longa. Carina ca. 16mm longa; lamina triangularis. Ovarium sessile, dense pilosum, stylo usque medio hirto. Legumen ovoideum, ca. 20mm longum, plus minusve dense lanatum, turbinato-pyriformis, erecto mucronatum.

Typus. Iran, Prov. Kerman: 40km from Jiroft on the road to Kerman, Kuh Sarzeh, 1500-2100m, 13.6.1977, M. Assadi & G. Miller 25325 (holotypus TARI).

***Astragalus latianicus* Maassoumi & Ranjbar, sp. nov.**

Differt ab *A. jessenii* Bge. capitulis ovato-oblongis (nec globosis), foliolis, stipulis superioribus, caulibus glabris, vexillis orbicularis.

Plantae perennes, 70cm altae, caulis erectus, glabratus. Stipulae ad 27mm longae, herbaceae superioribus ovatae acutae, petiolo per 1-2mm adnatae. Folia 16-25cm longa, petiolo ad 2cm longa. Foliola 8-10 juga, lanceolata, acuta, glaberrima, 45mm longa et 10mm lata. Capitulis axillaribus, ovato-oblongis, pedunculatis, sublongioribus. Bracteis linearibus, hispidis, 15mm longis. Calyx 23mm longus, campanulatus, villosus, dentibus 10mm longis, filiformis. Corolla glabra, flava. Vexillum ca. 22mm longum; lamina orbiculata, apice integra. Ala ca. 21mm longa; lamina oblonga, antice rotundata, basi auriculata; auricula ca. 3mm longa. Carina ca. 16mm longa; lamina triangularis. Ovarium sessile, dense pilosum, stylo glabro, ca. 20mm longo. Legumen ignotum.

Typus. Iran, Prov. Tehran: Sad-e-Latian, 1900m, 22.5.1973, Bazargan & Arazm 15346 (holotypus TARI).

***Astragalus zarjabadensis* Ranjbar, sp. nov.**

Differt ab *A. maabudii* Ranjbar caule et rachideque dense et patenter sericeo hirsuto.

Plantae perennes, ca. 60cm altae, caulis erectus, undulatus, ca. 3-5mm crassus, densissime appresse pilosus, caudex multiceps. Stipulae 20-23mm longae, herbaceae triangulares, acutae, petiolo per 1-2mm adnatae inter se liberae. Folia 10-24 cm longa, petiolo ad 2cm longo. Foliolis 11-14 jugis, ovatis, acutis, 2.5-3cm longis et 1.2-1.3cm latis. Inflorescentiae capitulis axillaris, globosis, pedunculo ca. 1-2cm longo. Bracteis linearibus hispidis, 14mm longis. Calyx 16mm longus, adpresse et longe pilosissimus; dentibus 6mm longis, triangularibus. Vexillum ca. 28mm longum; lamina obcordata. Ala ca. 26mm longa, lamina oblonga, antice latae triangularis; auricula ca. 2mm longa. Carina ca. 25mm longa; lamina triangularis. Ovarium sessile, dense pilosum, stylo $\frac{2}{3}$ piloso. Legumen ignotum.

Typus. Iran, Prov. Azarbayejan: 47 km on the road from Mianeh to Khalkhal (before Zarjabad village), 1800m, 20.6.1986, leg. Maassoumi & Abouhamzeh 56886 (holotypus TARI).

Astragalus ovalifoliolatus Maassoumi & Ranjbar **sp. nov.**

Differt ab *A. kirrindicus* Boiss. foliolis

majoribus et ovatis, vexillo alis brevioribus vel aequans.

Plantae perennes, ca. 50cm altae. Caulis erectus, ad nodos leviter flexuosus, densissime pili brevissimis patentibus obtectus. Stipulae 5-12mm longae, membranaceae, lanceolatae vel triangulares, petiolo per 1-2mm adnatae. Folia 9-22cm longa, petiolo abbreviato, sicut rachis brevissime piloso; foliola 6-9 juga, ovata apicem versus attenuata, antice acuta, basi cordata, 20mm longa, et 15mm lata, utrinque dense appresse pilosa. Inflorescentiae in axillis foliorum superiorum dense capitatae, 5cm diametro, pedunculo 3-4cm longo, piloso suffultae. Bractee filiformes, 13mm longae, pilosae. Bracteolae filiformes calycem aequantes. Calyx 20mm longus, late tubulosi-campanulatus, pilis 1-2mm longis obtectus, dentibus 10mm longis, tubum aequantibus vel longioribus. Corolla glabra, flava. Vexillum ca. 23mm longum; lamina late obcordata, apice retusa. Ala ca. 24mm longa; lamina oblongo-elliptica, late rotundata; auricula ca. 3mm longa. Carina ca. 23mm longa; lamina triangularis. Ovarium sessile, dense pilosum, stylo ad $\frac{2}{3}$ basim piloso, ca. 20mm longo. Legumen

hirtum turbinatum, crassiusculum, fungosum superne oblique truncatum et mucronatum dorso sub sulcatum, 9-10mm longum, 7mm latum. Semina ca. 3mm longa, 2mm lata.

Typus. Iran, Prov. Tehran: Arak, Toureh, Besri, NE. slope of Kuh-e Aladagh, 2100-3100m, 11.7.1985, V. Mozaffarian 64066 (holotypus TARI). -*Other specimens seen.* Prov. Tehran: Arak, Shahzand, Hafteh-O Emarat Alimabad, Kuh-e Alvand, 2100-2800m, 8.7.1985, V. Mozaffarian 63875; Prov. Lorestan: Oshtoran kuh, above the village Tihun, 2000-2500m, 12.7.1981, Assadi and Mozaffarian, 37088.

***Astragalus maabudii* Ranjbar, spec. nov.**

Differt ad *A. echinops* Aucher ex Boiss. foliolis supra glabris subtus adpresse sericeis calice ebracteolato, pedunculis capitula brevioribus.

Plantae perennes, 50cm altae. Caulis erectus, adpresse velutino-sericeus. Stipulis 16-18mm longis, herbaceis lanceolatis longe acuminatis, petiolo per 1-2mm

adnatis. Folia 10-20cm longa, petiolo ad 3 cm longo. Foliolis 11 jugis, lanceolatis, acutis, supra glabris, subtus adpresse sericeis, ca. 30mm longis, 10mm latis. Capitulis axillaribus, globosis, pedunculis ca. 1cm longis. Bracteis linearibus hispidis, 13mm longis. Calyx ca. 15mm longus, tubulosi-campanulatus, dense adpresse hirsutus, dentibus ca. 5mm longis, triangulari-linearibus, tubum duplo longioribus. Corolla glabra, flava. Vexillum ca. 23mm longum; lamina late rectangularis integra. Ala ca. 22mm longa; lamina oblonga, antice rotundata basi auriculata; auricula ca. 3mm longa, triangularis. Carina ca. 20mm longa; lamina triangularis. Ovarium sessile, dense pilosum, stylo ad medio piloso ca. 20mm longa. Lugumen ignotum.

Typus. Iran, prov. Azarbajejan: ca. 15 km on the road from Torkeman-chi to Oinligh, 1600m, 26.5.1987, Maassoumi 64900 (holotypus TARI; Isotypus herb. M). -*Other specimens seen.* Prov. Kordestan: Zanjan to Bijar, pass. of Khur-Khureh, 1750m, 31.5.74, Wendelbo, Shirdelpur and Assadi, 11927.