

840th species of genus *Astragalus* (Fabaceae) for the flora of Iran from Khorassan Province as a new record: *A. globiceps* Bunge

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Abstract

Here 840th species of genus *Astragalus* is recorded for flora of Iran. *Astragalus globiceps* Bunge, belonging to *Astragalus* section *Alopecuroidei* DC., is recognized in NE Iran, Khorassan Province. This species has already been recorded in Kazakhstan, Uzbekistan, Kirgizstan, Turkmenistan, Tadjikistan and Afghanistan. The picture and distribution map are presented, together with a description on the basis of the mentioned specimen and previous descriptions.

Key words: Leguminosae, NE Iran, Papilionaceae, SW Asia, taxonomy

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Introduction

Genus *Astragalus*, with c. 2850 species, is the largest genus of spermatophytes on the planet [15]. It is also the largest genus in the flora of Iran. Due to its being included in family Leguminosae, this family has attained the first place in terms of species number in Iran [9]. Since the territory of Iran has diverse ecological niches, species of this giant genus are found in almost all parts of the country, including deserts, mountains, forests, etc [4, 6, 7, 13, 16].

The last report by Ghahremaninejad [8] as to the number of this genus in Iran, i.e. 826 species, has been increased to 839 in papers which followed [1-3, 5, 9, 10-12, 14]. It embraces approximately 10.4% of the angiosperm flora of Iran. In this paper, a new record of the genus is added to the flora of Iran, in Khorassan Province, which extends the number of *Astragalus* to 840th in the country.

Khorassan Provinces (i.e. Razavi Khorassan, North Khorassan, South Khorassan) comprise more than 200 *Astragalus* species, of which approximately 90 species are endemic. During the authors'

work on unknown specimens in the herbarium of FUMH for the project of "Astragalus in Khorassan Province", *Astragalus globiceps* Bunge was recognized for the first time. This species belongs to sect. *Alopecuroidei* DC. This section includes seven species in Khorassan Provinces, of which two are endemic. The living residence of *A. globiceps* is Middle Asia (Kazakhstan, Uzbekistan (890 m), Kirgizstan, Turkmenistan, Tadjikistan) and N Afghanistan (930-1100 m) [15]. Therefore, this living residence must include Iran as well.

Results and Discussion

Taxonomic remarks

Genus *Astragalus* sect. *Alopecuroidei* DC.

Prodr. 2: 294. 1825. Type: *A. alopecuroides* L.

Syn.: *A. sect. Alopecias* (Steven) Bunge, *Alopecias* Steven.

This section includes 48 species, of which 24 (with 15 endemics) grow in Iran. There are seven species belonging to this section in Khorassan Provinces. The species in this

provinces are as follow. *A. alopecias* Pall., *A. kirrindicus* Boiss. & Noë, *A. neoassadianus* Ranjbar (endemic to the province), *A. neomaassoumianus* Ranjbar (endemic to the province), *A. obtusifolius* DC., *A. schahrudensis* Bunge and *A. turbinatus* Bunge [15]. Adding *A. globiceps* Bunge to this list, the number of the species for the provinces increases to eight.

New Record

Astragalus globiceps Bunge, Trudy Imp. S.-Petersburgsk. Bot. Sada 7: 372. 1880 (Figures 1, 2).

Type: Turkestan, inter Chus et Pendshakent S. Samarkand, 26.5., O.A. Fedtschenko 241 (Holotype: LE!; Isotype: K).

Syn.: *Tragacantha globiceps* (Bunge) Kuntze, Revis. Gen. Pl. 2: 945 (1891); *Alopecias globiceps* (Bunge) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 256 (1937); *Astragalus flavicomus* Bunge, Izv. Imp. Obshch. Ljubit. Estestv. Moskovsk. Univ. 26(2): 245 (1880); *A. timuranus* Franch., Ann. Sci. Nat., Bot. sér. 6, 15: 256 (1883); *A. agameticus* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada xviii. 38 (1900); *A. globiceps* subsp. *agameticus* (Lipsky) Popov, Bjull. Sredne-Aziatsk. Gosud. Univ. 14: 137 (1926); *A. macropshaerus* Freyn & Sint., Bull. Herb. Boiss., sér. 2, 4: 1116 (1904); *A. jakkabagi* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada xxvi. 160 (1910); *A. globiceps* f. *jakkabagi* (Lipsky) Popov, Bjull. Sredne-Aziatsk. Gosud. Univ. 14: 137 (1926); *A. androssowii* Litv., Trudy Bot. Muz. Imp. Akad. Nauk 7: 73 (1910); *A. globiceps* subsp. *agameticus* f. *sphaeroides* Popov, Bjull. Sredne-Aziatsk. Gosud. Univ. 14: 137 (1926); *A. czuiliensis* Golosk. B ot. Mater. Gerb. Bot. Inst. Bot. Acad. Nauk Kazakhsk. S.S.R. ii. 19 (1964) [15].

Description. Plants ca. 35 to 70 cm tall. Stems erect, 3.5 to 7 mm in diameter, densely hairy. Stipules usually green, filiform, 10 to 25 mm long, shortly adnate to the petiole, hairy and ciliate at the margins. Leaves 17 to 25 cm long; rachis hairy. Leaflets 15 to 25 pairs, elliptic to obovate, 14-25 x 7-14 mm, usually acuminate, on upper side usually glabrous,

on underside densely hairy. Peduncles robust, 5 to 8 cm long, hairy like the stem and rachis. Racemes globose to shortly cylindrical, 3 to 6 cm in diameter, with numerous flowers; axis densely covered with spreading long hairs. Bracts linear, 8 to 13 mm long, usually ciliate. Pedicels up to ca. 1 mm long. Bracteoles filiform, 6 to 12 mm long, ciliate. Calyx tubular, 18 to 27 mm long, densely covered with long hairs; teeth subulate to filiform, 5 to 13 mm long. Petals yellow, glabrous. Standard 23 to 29 mm long; blade elliptic to obovate, 6 to 8 mm wide, rounded to slightly emarginated; claw short. Wings 23 to 31 mm long; blades narrowly oblong, obtuse, 12-16 x 3-4 mm. Keel 22 to 30 mm long; blades triangular-elliptic, obtuse, 12-15 x 5-6 mm; auricle short. Stamen tube obliquely cut at the mouth, 22 to 23 mm long. Ovary 9 to 11 mm long, densely covered with long hairs; style hairy in lower part. Legumes unripen [15].

Phenology. Flowering June-July.

Specimen seen. Iran. Khorassan province: SW Sarakhs, Passkamar village, 01.06.1995, 480 m, Rafeie & Zangoorie 25690 (FUMH! T!).

The above description is written on the basis of the mentioned specimen and the description written by Podlech & Zarre [15]. The specimen was collected from an area close to Iran-Turkmenistan-Afghanistan frontiers a quarter of a century ago. In our description of the species, fruit (legume) characteristics were not presented. This is due to the fact that there were not ripened fruits in our specimen, as they did not probably have ripened fruits when they made other descriptions, either. Taking this record into consideration, the elevation range of the habitats for this species is changed to 480-1100 m.



Fig. 1. *Astragalus globiceps* Bunge; Rafeie & Zangoorie 25690 [FUMH]



Fig. 2. Distribution map of *Astragalus globiceps* Bunge (★).

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گزارش هشتصد و چهلمین گونه از سرده گون برای فلور ایران از استان خراسان: آستراگالوس گلویسپس

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چکیده

در این مقاله هشتصد و چهلمین گونه از سرده گون برای فلور ایران گزارش می گردد. گونه آستراگالوس گلویسپس از بخشه آلوپکوروایدهای از شمال شرق ایران، استان خراسان، یافت گردید. این گونه قبلا از کشورهای قزاقستان، ازبکستان، قرقیزستان، تاجیکستان، ترکمنستان و افغانستان گزارش شده بود. تصویر و نقشه پراکنش این گونه به همراه شرحی از آن بر اساس نمونه گیاهی مشاهده شده و شرح های موجود ارائه می گردد.

واژه های کلیدی: آرایه شناسی، تیره بقولات، تیره پروانه آسا، جنوب غرب آسیا، شمال شرق ایران

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