

## SOME NEW RECORDS OF THE GENUS ASTRAGALUS FROM IRAN

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Some new records of *Astragalus* from Khorassan and Azarbayejan provinces including *A. leiosemius* from sect. *Aegacantha*; *A. versipilus* from sect. *Erioceras* and *A. shebarensis* from sect. *Trachycercis* in Khorassan province and *A. ascioalyx* Bunge from sect. *Onobrychoidei* D.; *A. incertus* Ledeb., *A. dzhebrailicus* Grossh. and *A. psoraloides* all from sect. *Hololeuce* Bunge are recorded from W. Azarbayejan province.

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گزارشهای جدید از جنس گون در ایران

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بر پایه جمع‌آوری‌های جدید از نقاط مختلف کشور تعدادی گونه بعنوان گزارش جدید از ایران معرفی می‌گردد. این گونه‌ها عبارتند از: *A. incertus*، *A. dzhebrailicus*، *A. psoraloides* همگی از بخش *Hololeuce*، *A. ascioalyx* از بخش *Onobrychoidei*؛ گونه *A. leiosemius* از بخش *Aegacantha*؛ *A. versipilus* از بخش *Erioceras* و *A. shebarensis* از بخش *Trachycercis*. برای هر یک از گونه‌های فوق با ذکر نمونه‌های هرباریومی و نیز توضیحات اندکی اشاره شده است. براساس این تحقیق بخش *Aegacantha* که تاکنون فقط از افغانستان، تاجیکستان و پاکستان شناخته شده بود در ایران نیز پراکنش داشته و بدین ترتیب به لیست فلور گون‌های ایران اضافه می‌گردد.

## INTRODUCTION

In this investigation several new records are presented for Iranian territory. The new records mainly belonging to different sections of bifurcate haired groups such as: *A. asciocalyx* belongs to sect. *Onobrychoidei* Bunge; *A. dzhebrailicus*, *A. incertus* and *A. psoraloides* all belong to sect. *Hololeuce* Bunge; also *A. shebarensis* belongs to sect. *Trachycercis*; *A. versipilus* belongs to sect. *Erioceras* and *A. leiosemius* with the simple haired belongs to sect. *Aegacantha* Bunge. Based on this investigation section *Aegacantha* should be considered for the flora of Iran.

## TAXONOMIC ACCOUNT

### Sect. *Aegacantha* Bunge

#### 1. *Astragalus leiosemius* (Lipsky) Popov

*Specimens seen.* Khorassan: Torbat-e Heydariyeh, mountains of S. Torbat-e Heydariyeh in the gorge toward the village, 2000-2500 m, Amirabadi & Paryab 4901 (det. Podlech); E. of Birjand, Akbarabad to Hossein abad, 2300 m, Faghihnia & Zangoie 30180; Torbat-e Heydariyeh, Bizgh village, N. slope opposite of village, 2200-2250 m, Amirabadi & Paryab 8412; Ferdous, altitudes between Kalatehsar to Sarayan, Moussavi & Ranjbar 6978.

*Sect. Aegacantha* Bunge is relatively close to *sect. Acanthophaea* Bunge which is widely distributed in Iran. Based on the main monograph of the section (Deml, 1972), *sect. Aegacantha* consist more than 50 species and subspecies which are mainly distributed in Tadzhikistan, Pamir Alai mountain range and Afghanistan. This section revised recently for Flora Iranica area (Podlech et al. 2001) with accounting of 40 species and 11 subspecies, from Iran. *A. leiosemius* (Lipsky) Popov includes two subspecies largely distributed in Afghanistan. The new collection of *Astragalus* from Khorassan province shows that this

species extends to Iran, Based on this new record, *sect. Aegacantha* should be considered also for the Iranian *Astragalus* flora.

### Sect. *Erioceras* Bunge

#### 2. *Astragalus versipilus* Rech. f. & Koie

Khorassan: Torbat-e Jam, Bakhezz, 10 km on the main road to Ostadi village, 1770 m, Assadi & Amirabadi 84615; between Mashhad and Sarakhs, Bazangan deviation, 650 m, Faghihnia & Zangoie 19429; Kashmar, Rivash (Kuh-Sorkheh), between Tajroud and Kharrou, 1900 m, Faghihnia & Zangoie 25303.

### Sect. *Hololeuce* Bunge

#### 3. *A. dzhebrailicus* Grossh.

Azarbayejan: N. W. Khoy, high rangelands of Haji- Jafan, 2500-2800 m, 38°, 49' N; 44°, 24' E, Safavi, Alizadeh & Nikchehre 84141; Uroumiyeh, Salmas, road to Haji- Jafan, c. 2-5 km after Kouzarash, 2250-2500 m, Maassoumi & Nikchehreh 80323; Marand, Zunuz, Zunudagh to Kuhkamar, 1800 m, Mozaffarian 72769 (det. Podlech); Maku, Chaldoran to Khoy c. 3 km on the road from deviation to Mahlamlou, 1950 m, 38°, 54', 64'' N; 44°, 20', 37'' E, Safavi & Nikchehreh 84071.

#### 4. *A. incertus* Ledeb.

Azarbayejan: W. of Salmas, mountains around Boreshkhoran village, 2300-2500 m, 38°, 16' N; 44°, 28' E, Safavi, Alizadeh & Nikchehre 84170.

*Astragalus incertus* Ledeb. within *sect. Hololeuce* Bunge with having extremely asymmetrically to subbasifixed bifurcate and/or basifixed (simple) hairs immediately separable from all other species. This feature is well known for several species from different sections, i. e. *A. (Onobrychoidei) parvarensis* Podlech, *A. (Stereothrix) ledinghamii* Barneby and *A. (Malacothrix) podocarpus*. etc.

Based on the recent molecular analysis of the genus (Kazempour et al. 2003) several species of the classical simple hairy groups nested with true medifixed hairy ones. This aspect seems to be extremely difficult to interpret the dispersion of the simple hairs species within bifurcate groups.

**5. *A. psoraloides* Lam.**

Azarbayejan: Maku, c. 28 km on the road from Shote to Chaldoran, 1919 m, 30, 03 N; 44°, 35' E, Safavi & Nikchehre 84058, 84059; N. W. of Khoy, altitudes of Turkey border from Zourabad Ghezelje, Kelisa to Dizag Aland. 2750 m, Mozaffarian 64984; Maku, Kelisa Kandi, Oruj Kandi, 2032 m, 39°, 23' N; 44°, 05' E, Safavi & Nikchehre 84056, 84055; Maku, c. 3 km on the road from Chaldoran to Khoy from Firuragh road, 1980 m, 31°, 01 N; 44, 23 E, Safavi & Nikchehre 84070; Maku, Shote, Chaldoran, N. W. slope, 1860 m, 39°, 05', 29'' N; 44°, 23', 43'' E, Maassoumi & Safavi 82571; Ibidem, Safavi & Nikchehre 84063, 84064.

**Sect. *Onobrychoidei* DC.**

**6. *A. asciocalyx* Bunge**

Azarbayejan: W. of Salmas, mountains around Boreshkhoran village, 2300-2500 m, 38°, 16' N; 44°, 28' E, Safavi, Alizadeh & Nikchehre 84170, 84173, 84172, 84171; Uroumiyeh, Salmas, road to Haji-Jafan, 2250-2500 m, Maassoumi & Nikchehreh 80322.

This species distinguishable from other species in *sect. Onobrychoidei* DC. with inflated calyces

**Sect. *Trachycercis* Bunge**

**7. *A. shebarensis* Podlech**

Semnan: Ca. 30 km NW Shahrud, Shahvar mt., above Tash village, Assadi & Maassoumi 21074.

Above mentioned species is closely related to *A. durandianus* Aitch. & Baker which grows in the same area, but these two related species by the shape of leaflets which is obovate and retuse to emarginate at the apex separable from *A. shebarensis* Podlech.

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