



ASTRAGALUS SIVERESIANUS PALL (АСТРАГАЛ СИВЕРСА) -
BIOMORPHICOLOGY AND MEDICINAL CHARACTERISTICS

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Annotation: In this article information such as morphology of the *Astragalus siveresianus* plant, Botanical qualities, flower structure, leaf arrangement, shape of the stone, flowering, yield, distribution of geography, chemical composition, specificity, utilization in medicine are presented

Key words: Botanical expression, leaf, flower, fruit, geographical distribution, medicinal properties, use in medicine

The President of the Republic of Uzbekistan signed a decree on May 20, 2022, entitled "Improving the cultivation, reprocessing, and efficient use of industrial crops, as well as their further processing" aimed at creating opportunities for cultivating industrial crops and establishing their plantations in our country.

Botanical Info

Familia: Fabaceae

Subfamilia: Faboideae

Tribus: Galegeae

Genus: Astragalus

Species: *Astragalus sieversianus*

Astragalus siveresianus from the Fabaceae family is represented by the following description:

It is a perennial plant ranging from 60 to 150 cm in height, with a densely hairy stem and covered with short, curly hairs throughout the lower part of the stem.

The leaves are compound, with broad leaflets, free, entire, and having a length of 20-25 mm, green-gray, and covered with appressed, curly hairs on the edges.

The leaves are densely covered with curly hairs, measuring 15-20 (30) cm in length. These hairs give the leaves a grayish appearance and a dense texture.

The leaflets are arranged in 8-12 (14) pairs, elongated-elliptic or nearly rectangular, with a length of 3.5-4 (5) cm. They are green-gray and have sparse, curly hairs on the upper surface, while the underside is densely covered with short, curly hairs.

Description of the Flower: The flowers are clustered in groups of 3-5, densely packed in a spike. The flower tube is 1-3 mm long, with white hairs. The flower crown is yellowish-green, 35-40 mm long, with a beak-like appendage on the tip, slightly bent, slightly curved towards the base, and the claw is 7-8 mm long. The wings are 31-34 mm long, with a smooth beak appendage, slightly longer than 20 mm, and the keel is 20-30 mm long.



Fruit: It is a dry, brown fruit. Its beak appendage is slightly curved, with a length of 20-32 mm and a width of 15-18 mm. It is somewhat twisted on the back, with the upper surface densely covered with short hairs, with two ears, and covered with thick hairs.

Stem: The stem is cylindrical, 4-7 mm long, and densely covered with short, soft, reddish-brown hairs.

It blooms from April to July.

It fruits from May to August.

Geographical Distribution:

Central Asia, Kazakhstan, Turkmenistan, Iran. It grows in the Basins of Chujsky, Talassky and Fergana valleys. It is found on pastures, in valleys, steppes, spreading from foothills up to mid mountain zones.

In Kazakhstan: it is found in the Tarbagatai, Jungar, Zailiysky, and Kungey Alatau mountains, as well as in the Chu-Ili mountains and Karatau.

Region: Central Asia (Tian-Shan, Western Pamir-Alay, Kopetdag), and northern Iran.

Chemical Content

Saponins of 5.94 %. Alkaloids. Coumarins of 0.03 %. Flavonoids- 2.8 %: meletin glycosides. Roots-triterpenoids: sievercigenine, cyclosieverciosids. Upperground part: Saponins . Alkaloids of 0.1 %. Coumarins. Tannins. Flavonoids.

Traditional Use and Activity

In mountain districts of Kirghizia and Kazakhstan it is used in the treatment of excitatory diseases. Roots are used for horse malanders in Turkmenia. Upperground part extracts show antibacterial and antifungal activity. In Tajikistan the plant preparation is given as a drink for epilepsy and venereal diseases. Fruits and seeds are used in the treatment of syphilis in northern Tajikistan as well as in Turkmenia, where plant parts are smoked in pipes.

REFERENCES:

1.B.YO.Tóxtaev, I.J.Abdumuxammedalieva, J.J.Aqseytov Dárilik hám aziqliq ósimliklerdiñ plantacıyaların shólkemlestiriw hám shıykı zatın tayarlaw. Nókis «İlmpaz» 2021 (7-9)

2.Axrorova D., Radjabov A.I. Микроэлементный состав табака и его значения в загрязненности почвы // Fan yutiqlari va qishloq xo'jaligini rivojlantirish istiqbollari: II.-amal.anjuman materiallari.-Samarqnd, 2005-y. B-18-20.

3.Allanazarov U., Raximova T.T., Vamidov Y.S. Qizilqum yaylovlarida cho'llanish.// Развитие ботанической науки в Центральной Азии и её интеграция в производство: Матер, междун. научной конф.- Tashkent, 2004.-y. 103-105.

4.Ashurmetov O.A. Антэкология и эмбриология дикорастущих бобовых Embryology and seed reproduction: Тез. докл. междун. симпозиума.-St.-Pb., 1992.-P. 53-54.

5.Ashurmetov O.A., Buriev X.Ch Репродуктивная биология представителей семейства Cucurbitaceae Juss.-Тошкент: Фан, 2002-y 216 -b



6. Ashurmetov O.A. Преспективы развития ботанических исследований Ботаника, экология, o'simliklar muhofaza: Xalqaro il.-amal. konf k.materiallari-Andijon, 2007. –B 5-6.

7. Ashurmetov O.A., Buriev X.Ch Репродуктивная биология представителей семейства Cucurbitaceae Juss.-Toshrent: Fan, 2002. 216 b.

8. Kolyasnikova N.JL Особенности репродуктивной биологии некоторых видов рода *Astragalus* L. // Проблемы ботаники на рубеже XX-XXI веков.- СПб., 1998.у. b -123.

9. Internet sources

http://www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=242306766

https://species.wikimedia.org/wiki/Astragalus_sieversianus

<https://www.inaturalist.org/taxa/960319-Astragalus-sieversianus>

<https://fungi.su/>

<https://www.naturalcompounds.org/featured-extracts/astragalus-sieversianus-pall.html>