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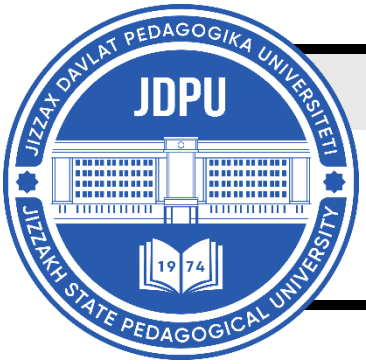
MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL

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ANALYSIS OF HERBARIAL SPECIMENS OF DRABA ARSENIEWII, DRABA HUETII, DRABA MELONOPUS BELONGING TO THE BRASSICACEAE FAMILY DISTRIBUTED IN THE FLORA OF UZBEKISTAN

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ABOUT ARTICLE

Key words: Brassicaceae, Draba arsenewii, Draba huetii, Draba melonopus, Mountainous Central Asian province, Ugom-Piskom region, Chotkal region, Chorkesar region.

Abstract: Herbarium specimens of Draba arsenewii, Draba huetii, Draba melonopus belonging to the Brassicaceae family distributed in the flora of Uzbekistan are analyzed in the article.

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INTRODUCTION

Global climate changes and anthropogenic impacts are evident in the reduction and transformation of natural ecosystem components, including natural flora. In this regard, research aimed at determining the composition of local flora and assessing the current status of populations of rare and endemic species is considered important. Accordingly, taking into account the influence of negative factors, it is of scientific and practical importance to determine the economically important species of flora, to develop the scientific basis of their rational use, and to create digital databases.

A lot of attention was paid to continuous monitoring of the flora and plant cover of botanical-geographic regions of arid regions, which are particularly important in the world as an area prone to climate change and anthropogenic effects. In this regard, although floristic research in the arid regions of Central Asia has a history of more than a century, to date, it is effective in determining the composition of plant species in natural ecosystems, as well as forming new generation distribution maps created in the geoinformation system and preserving rare and endemic species. results were obtained. Modern floristic studies in the world pay great attention to the botanical and ecological

zoning of regions based on florogenetic approaches. In this regard, extensive research of plant diversity, compilation of national and local flora synopses, determination of the current status of rare and endemic species are urgent problems of modern botanical science.

MATERIALS AND METHODS

Based on the President's decision of July 17, 2018, "On measures to further improve the activity of the Institute of Botany of the Academy of Sciences of the Republic of Uzbekistan, the unique scientific object of the institute - the National Herbarium of Uzbekistan was recognized as a herbarium of national importance." Samples of the National Herbarium of Uzbekistan are collected from Central Asia, Mongolia, China, Russia, Ukraine, and even North African countries. The information stored in herbarium collections becomes unique over time and serves as a basis for scientific research.

Over the next two decades, the world's biodiversity crisis continues despite ever-increasing measures. Sustainable management of biological resources and their rational use require targeted rapid and decisive measures aimed at preserving specific species and ecosystems. For this, it is necessary to further strengthen the capacity to study biological diversity at the national and international level and to systematically monitor it, to improve the functional activity of natural ecosystems, and to develop a set of effective local measures. Law of the Republic of Uzbekistan No. 409 of September 21, 2016 "On Protection and Use of Flora", Cabinet of Ministers No. 142 of May 27, 2013 "Program of Actions on Environmental Protection in the Republic of Uzbekistan in 2013-2017 in order to ensure the implementation of the decisions on" taxonomic analysis of Draba arseniewii, Draba huetii, Draba melonopus species belonging to the Brassicaceae family distributed in the flora of Uzbekistan.

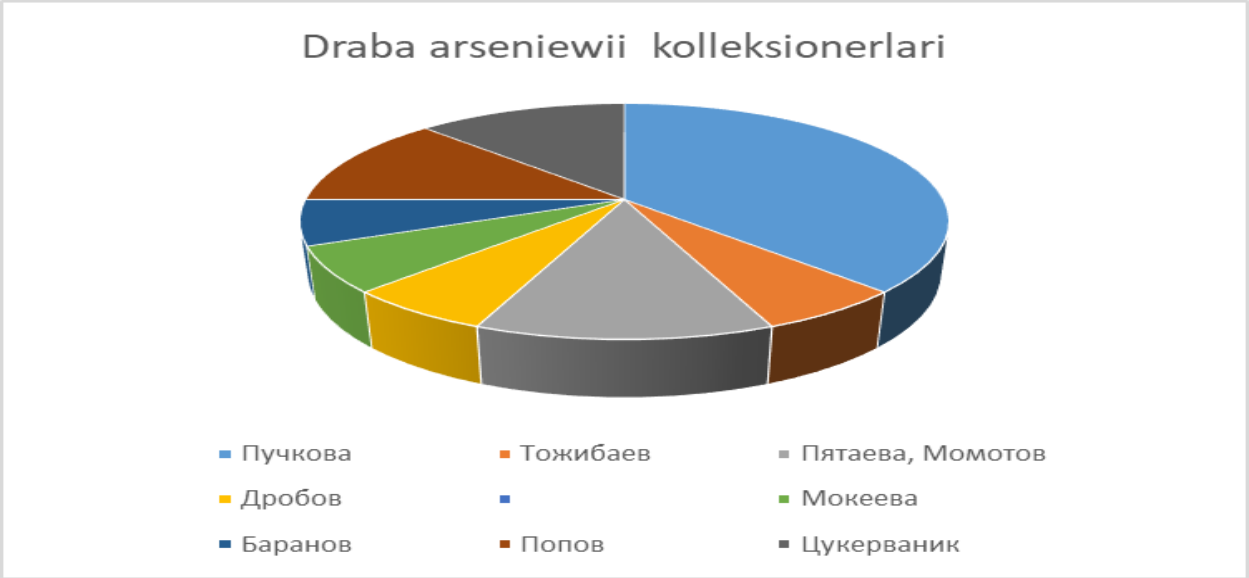
Material and methods. Research materials Draba L. series Draba arseniewii, Draba huetii, Draba melonopus species found in the West-Tianshan botanical-geographical district of the Mountainous Central Asian province (I), stored in the background of the unique scientific object of the National Herbarium of Uzbekistan (TASH) are herbarium specimens. The names of categories and species were given on the basis of the international electronic database "Opredelitel rastenyi Sredney Azii" and International Plants Names Index (www.ipni.org). The information in the herbarium labels is given in the language in which it is given (without translation).

RESULTS AND DISCUSSIONS

Herbarium samples of Draba arseniewii belonging to the Brassicaceae family kept in the unique scientific facility of the National Herbarium of Uzbekistan were analyzed. As a result of the study of the herbarium specimens stored in the unique scientific facility of the National Herbarium of Uzbekistan, it became known that in the flora of Uzbekistan, the herbarium specimens of the species Draba arseniewii belonging to the Brassicaceae family are mainly found in the Mountainous Central

Asian Province (I), G' It was collected from: Ugom-Piskom (I-1-a), Chotkal (I-1-b), Chorkesar region (I-1-e) of the western-Tianshan botanical-geographic district (I-1).

Regions of the West-Tianshan botanical-geographic district	Number of herbarium specimens
Ugom-Piskom botanical-geographic region	11
Chotkal botanical-geographic region	4
Chorkesar botanical-geographic region	1
Total:	16 samples



As can be seen from the above table, there are only 16 herbarium specimens of Draba arseniewii belonging to the Brassicaceae family kept in the unique scientific facility of the National Herbarium of Uzbekistan. Below we will get acquainted with the morphology of Draba arseniewii species.

Draba arseniewii

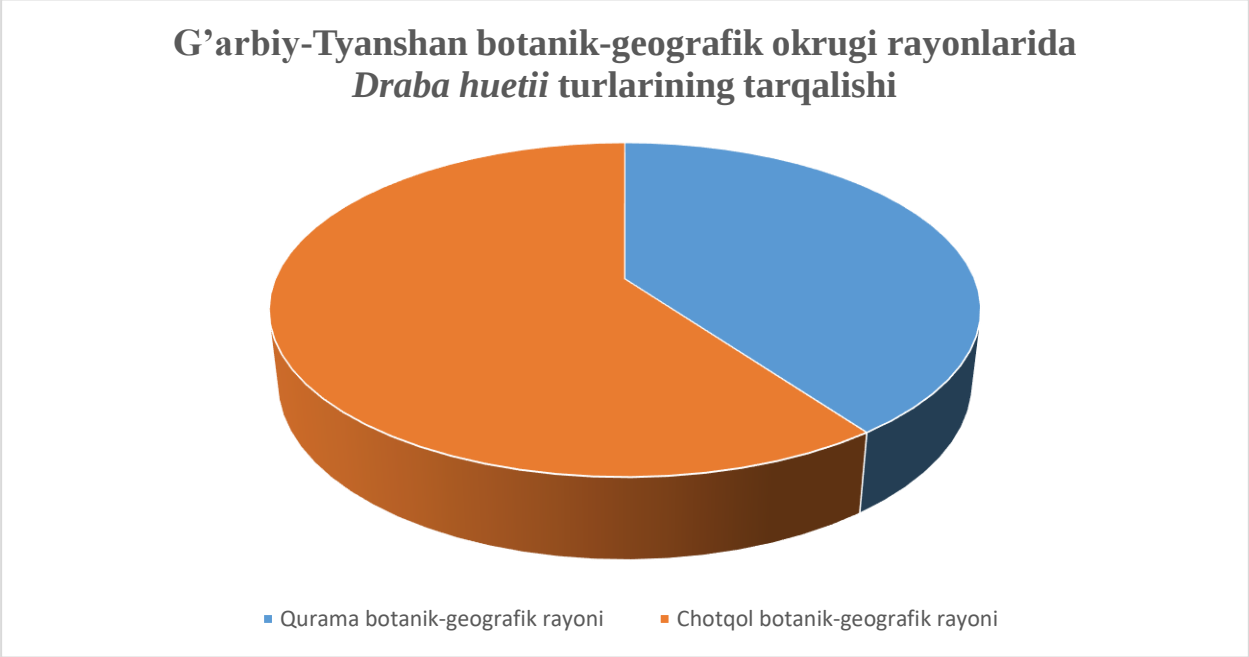
The stem is simple, branched, thin, 4-11 cm erect perennial plant. On a long simple stem, densely forked, covered with branching hairs. The leaves are simple, arranged in a row at the root neck and stem. The leaves at the root neck fall off early, the leaves on the stem are oblong-ovate, sharp, broadly toothed, 3mm x 1.5cm in length and width. The flowers are bisexual, the color of the flower is yellow, and it is located in a single flower. The fruit is a pod, 3 mm x 1.5 cm in length and width.

The herbarium specimens of the species Draba huetii, belonging to the Brassicaceae family, kept in the unique scientific facility of the National Herbarium of Uzbekistan, were analyzed according to their distribution in botanical and geographical regions. Herbarium specimens of Draba huetii belonging to the Brassicaceae family kept in the unique scientific facility of the National Herbarium of Uzbekistan were analyzed. As a result of the study of the herbarium specimens stored in the unique scientific facility of the National Herbarium of Uzbekistan, it became known that the

herbarium specimens of the species Draba huetii belonging to the Brassicaceae family in the flora of Uzbekistan are mainly from the Mountainous Central Asian Province (I), G' West-Tianshan botanical-geographic district (I-1): Chotkal district (I-1-b) Kurama district (I-1-d) and West Hisar botanical-geographic district (I-6): Boysun It was dialed from the district (I-6-c).

Spreading of Draba huetii species in the regions of the West-Tianshan botanical-geographic district

Regions of the West-Tianshan botanical-geographic district	**Number of herbarium specimens**
Kurama botanical-geographic region	4
Chotkal botanical-geographic region	6
Total:	10 samples



Spreading of Draba huetii species in the regions of West-Hisor botanical-geographical district

Regions of the botanical-geographical district of West Hisar	**Number of herbarium specimens**
Botanic-geographical district of Boisun district	2
Total:	2 samples

(TASH) specimens of Draba Draba huetii species collected from Chotkal district of West-Tianshan botanical-geographic district, stored in the herbarium fund of TASH, Tojibaev (06.06.2007, Zapadnyy Tyan-Shan. Chatkalsky khr., valley river Akhangaran, Kelinchaksay., 41,627903; 70.147591), Tojibaev (06.06.2007, Zapadnyy Tyan-Shan. Chatkalsky khr., valley river Akhangaran, Kelinchaksay., 41.627903; 70.147591), Tojibaev (27.05.2007, Zapadnyy Tyan-Shan. Ushchele Bolshogo Chimgana za kanatkoy.., 41.525355; 70.024957), Belov (29.04.1926, Zapadnyy Tyan-Shan. Okrestnosti Chimganskoy Botanicheskoy stantsii. Kurort Chimgan.., 41.527892; 70.024435),

Gomolitsky (16.05.1929, Zapadnyy Tyan-Shan. Okrestnosti Chimganskoy Botanicheskoy stantsii. G. M. Chimgan, shchebenchatyy sklon., 41.538469; 70.036487), Nazarenko (05.09.1953, Basseyn r. Bash-Kyzyl-say. Zap. Expozitsion sklona v srednem techenii Iran saya. Po beregu arychka u pashni., 41.235874; 69.964159) were typed by.

Specimens of Draba huetii species collected from Kurama district, West-Tianshan botanical-geographic district, Tojibaev (24.04.2007, Zapadnyy Tyan-Shan. Kuraminsky khr. Abjasai. Stebli vnizu gusto opushchennye, pryamye., 40.878029; 69.912351), Tojibaev (26.04.2008, Kuraminsky khr. Levyy bereg r. Akhangaran. Tashbulak-say, archevyy poyas., 40.7688; 69.8508), Matskevich (20.05.1931, Angren say Itelge. Staraya pashnya odno iz preobladayushchix na pashnyakh.., 41, 058895; 70.365951), Matskevich (03.05.1931, Herbarium yugo-vostochnoy chasti Samarkand region. Mogol-Tau. Ushchele Uch-Bag., 41.058895; 70.365951) was typed by

Specimens of Draba huetii collected from Boysun district of West-Hissar botanical-geographical district, Turginov (30.03.2013. Pamiroalay. Otrogi Yugo-zapadnogo Gissara. Baysuntau. Basseyn reki Machay-darya. Omonkhona. (ex. 2 ex.)., 38 ,237415; 67,318026), typed by Turginov (20.04.2012. Pamiroalay. Otrogi Yugo-zapadnogo Gissara. Baysuntau. Basin river Machay-darya., 38.342511; 67.092395).

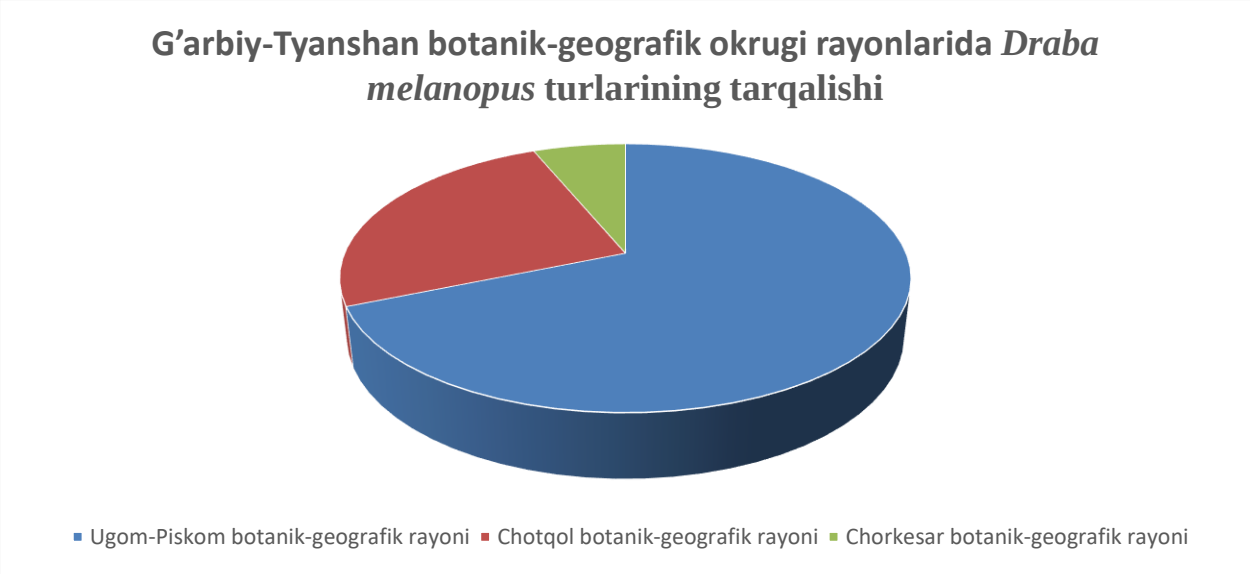
Draba huetii Boiss.

The stem is simple, rarely branched, thin, 3-17 (30)cm erect annual plant. On a long simple stem, densely forked, covered with branching hairs. The leaves are simple, arranged in a row at the root neck and stem. The leaves at the rhizome fall early, the leaves on the stem are oblong-ovate, sharp, broadly toothed, 6-20mm x 3-7mm in length and width. The flowers are bisexual, located in single inflorescences. The fruit is a pod, 1-2mm x 0.5-1mm in length and width.

The herbarium specimens of Draba melanopus belonging to the Brassicaceae family kept in the unique scientific facility of the National Herbarium of Uzbekistan were analyzed according to their distribution in botanical and geographical regions. Herbarium specimens of Draba melanopus species belonging to the Brassicaceae family kept in the unique scientific facility of the National Herbarium of Uzbekistan were analyzed. As a result of the study of the herbarium specimens stored in the unique scientific facility of the National Herbarium of Uzbekistan, it became known that the herbarium specimens of the species Draba melanopus belonging to the Brassicaceae family in the flora of Uzbekistan are mainly found in the Mountainous Central Asian Province (I), G' West-Tianshan botanical-geographic district (I-1): Ugom-Piskom (I-1-a), Chotkal district (I-1-b), Arashan district (I-1-c) and West Hisar It was collected from: Kashkadarya district (I-6-a), : Boysun district (I-6-c), : Kokhitang district (I-6-d) of botanical-geographic district (I-6).

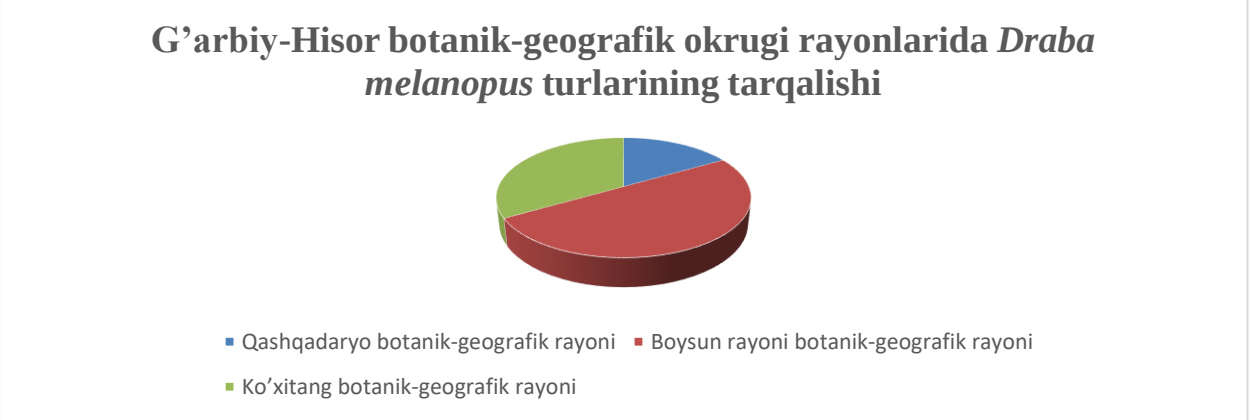
Spreading of Draba melanopus species in the regions of the West-Tianshan botanical-geographic district

Regions of the West-Tianshan botanical-geographic district	Number of herbarium specimens
Ugom-Piskom botanical-geographic region	2
Chotkal botanical-geographic region	6
Arashan botanical-geographic region	2
Total:	10 samples



Spreading of Draba melanopus species in the regions of the botanical-geographical district of West Hisar

Regions of the botanical-geographical district of West Hisar	Number of herbarium specimens
Kashkadarya botanical-geographic region	1
Botanic-geographical district of Boisun district	3
Kokhitang botanical-geographic region	2
Total:	6 samples



(TASH) specimens of Draba melanopus species collected from the Ugom-Piskom region of qthe West-Tianshan botanical-geographic district, Granitov (18.08.1956 Zap. Tyan-Shan. Verkhovya r. Aygaing. Sklony berega Ak-Kopchigay-saya po doroge) k perevalu (4200 m)., 42.219953; 70.985618) and collected by Baranov (00.06.1921, Syr-Darinskaya obl. Tashkentsky u. Dolina r. Ugama., 41.698981; 69.940948).

Specimens of Draba melanopus species collected from Chotkal region, West-Tianshan botanical-geographical district, Petrov (24.07.1959, Zap. Tian-Shan. "Mestoobitanie pishchuxi" 2 verkhovya Ak-Bulak-saya (verkhovya Nayza-saya). Vys. Ok 3000 m., 41.415093; 70.433777), Petrov (24.07.1959, Zap. Tyan-Shan. Verkhovya Ak-Bulak-saya (verkhovya Nayza-saya). Vys. 3000 m., 41.409915; 70 ,423308), Homolitsky. (25.09.1929, Zap. Tien-Shan. Okrestnosti Chimganskoy Botanicheskoy stantsii. B. Chimgan., 41.530446; 70.027725), Tsukervanik (12.07.1956, Zap. Tien-Shan. Chimgan. SV sklony B. Chimgana.. 195478), collected by Korotkova, Titov (17.07.1936, Ur. Myn-Djilke. Verkh. R. Nurek-ata. Yuzhnye shchebnev. Sklony., 41.469422; 70.062328).

Specimens of the Draba melanopus species collected from the Arashan region of the West-Tianshan botanical-geographic district, collected by Kudryashev (22.08.1939, Verkhove r. Angren. Angrenskoe plato. Vostochnaya chast. Melkozemisto-shchebnistaya pochva. Severnyy krutoy sklon.., 41,283532; 70 ,467669), Butkov, Maylun (07.07.1954, Zapadnyy Tyan-Shan. Basseyn r. Angren. Ozero Arashan (verkhnee) melkzemisto-shchebnistyy sklon sredi skal., 41.357855; 70.511487).

(TASH) specimens of Draba melanopus collected from the Kashkadarya district of the West-Hisor botanical-geographic district, where the herbarium fund is kept, Povarov (07.08.1941. Shakhrizyabs. Bass. R. Ak-su. Verkh. R. Tamshush. Sary-Syrt. Kamenistyy grunt., 38.991071; 67.366035) typed by.

Specimens of Draba melanopus collected from Boysun district, West Hisar botanical-geographic district,) collected by Demurina (13.08.1934. Pamiro-Alay. Gory Khodja-Gurgur-Ata. Uroch. Ming-Chukur, severnyy sklon v 4-5 km k yugu ot vysoty 1462., 38.478255; 67.255985), Bochantsev, Vvedensky (31.07.1930. Gory Chulbair. Melkozemnyy sklon na grebne Khodja-Barku.., 38.369428; 67.556821), Bochantsev, Vvedensky (31.07.1930. Gory Chulbair. Melkozemnyy sklon na grebne Khodja-Barku, 38.369428; 67.556821.

Specimens of Draba melanopus collected from the Kokhitang district of the West Hisar botanical-geographic district, Gnezdillo (14.07.1935. Pamiro-Alay. Khr. Kugitang. Zapadnyy sklon. Verkhove uschchelya Besh-Kotan-Dara. Vblizi snega.., 37, 841049; 66.653501), collected by Popov (27.06.1927. Shirabadskaya dolina. Greben Kugitanga protiv s. Kizil-Alma., 37.85734; 66.700896).

Collectors	Collected herbarium specimens
Granitov	1
Baranov	1
Petrov	3
Gomolitskiy	1
Tsukervanik	1
Korotkova, Titov	1
Kuryashev	1
Butkov, Maylun	1
Povarov	1

Demurina	1
Bochanstev, Vvedenskiy	2
Gnezdillo	1
Popov	1
Total number of samples: 16	

Draba melanopus Com.

Perennial herbs, 3-15 () cm tall. The stem has several branches, the last branches end in balls and are covered with leaves of previous years. Stem erect, simple, sparsely tomentose proximally, glabrous or distally, rarely with stellate trichomes. Basal leaves up to 6 cm wide; leaf blade oblong or oblong-spatulate, rarely linear-oblong, (0.3-)0.6-1.7 (-1.9) cm × 1.5-4 mm, densely tomentose 4-6 rayed stellate trichomes with 1 or more rays forked or. Lateral branch on both sides, base attenuate or acuminate, margin entire, apex obtuse. Cauline leaves absent or rarely 1, sessile; leaf blade oblong, tomentose like the basal leaves, margin entire, apex impenetrable. Racemes 5-18 (-20)-flowered, glabrous, fruit elongated. Fruiting pedicels (0.5-)0.7-1.5 cm, ascending in divisions, straight, glabrous or rarely sparsely tomentose.

REFERENCES:

1. Tojibaev K.Sh. Taxonomic reassessment of the flora of the Chatkal Biosphere Reserve. // Proceedings of the Chatkal State Biosphere Reserve. Tashkent, 2004. - Issue. V. - pp. 147-152.

2. Tojibaev K.Sh. List of vascular plants of the Chatkal Biosphere Reserve // Proceedings of the Chatkal State Biosphere Reserve. Tashkent, 2007. - Issue. VI. S. 64-95.

3. Pavlov V.N. Features of the flora of the Western Tien Shan. On Sat. Problems of botany. Highland flora and its development. L.: Nauka, 1974. T. 12.

4. Pavlov V.N. Vegetation cover of the Western Tien Shan. M.: Publishing house. Moscow State University, 1980. 248 p.

5. Pavlov N.V. Floristic analysis of the Bostandyk region (Uzbek SSR). In the book. Academician V.N. Sukachev on his 75th birthday. M. - L., 1956. P. 398-407.