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Analysis of herbary samples of dracocephalum l. trees distributed in uzbekistan

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Abstract The article describes the species of Dracocephalum L., distributed in the flora of Uzbekistan,the National Herbarium (TASH) of the institute of Botany of the Academy of Sciences of Uzbekistan and they analyzed the samples stored in the herbarium fund of the Moscow State University Lomonosov (MW). Accordingly, 2174 herbarium specimens collected from Central Asia and Uzbekistan were collected in the (MW) herbarium fund, and 1738 herbarium specimens of 22 species were critically analyzed in the TASH fund. An electronic database was linked based on the study.

Key words: Dracocephalum L., Central Asia, Western Tien Shan

INTRODUCTION

According to the literature, the number of Dracocephalum L. species on Earth varies widely. According to the latest data, there are more than 70 species of the genus on Earth. In particular, while only 24 species of the genus are listed in Siberia, this figure is 26 species for Central Asia (1987) [5; pp. 106-111; 3; 199-201-b.; 2; Pp. 59-68].

Representatives of the group are not evenly distributed in Central Asia and the Republic of Uzbekistan. Data on local flora show that the Dracocephalum L. family has 18 species in the Kyrgyz Republic (2016), 13 species in the Republic of Tajikistan (1986), 22 species in the Republic of Kazakhstan (2001), and 195 species in the Republic of Turkmenistan.) - 1 type occurs [8; 384-b .; 6; 135-137-b .; 4; 178-b .; 7; 162-164-p.].

Analysis of Dracocephalum L. species in flora, Table 1.

Category name	Uzbekistan (area 447,000 km²)	Kazakhstan (area 2724 902 km²)	Kyrgyzstan (area 198,500 km²)	Tajikistan (area 142,000 km²)	Turkmenistan (area 488,100 km²)
	Number of species (species found in Uzbekistan)				
Dracocephalum L.	15(3)	22 (10)	18 (9)	13(8)	1

During the study, the largest herbarium funds in the world and in Central Asia, the National Herbarium (TASH) and M.V. Herbarium specimens collected from Uzbekistan and neighboring regions kept in the herbarium fund of the Lomonosov Moscow State University (MW) were critically analyzed. It is known that the materials collected by collectors play a key role in the analysis of herbarium specimens. This, in turn, will help solve a number of problems related to the geography of the species. During these analyzes, the main collectors of the samples, the number of species collected and the areas collected were identified.

As you know, M.V. The Lomonosov Moscow State University (MW) Herbarium Foundation has many herbarium specimens collected from Central Asia. 2174 herbarium specimens of Dracocephalum family collected from the territory of Uzbekistan were critically analyzed

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from this fund. The results of these analyzes show that 9 species of the series were collected from the territory of Uzbekistan. Herbarium analysis shows that V. Pavlov can be recognized as the main collector of the collected herbariums. 7 species (D. komorovii, D, nodulosum, D. spinulosum, D. paulsenii, D. integrifolium, D. oblongifolium, D. nutans) were collected from the Ugom and Pskom ridges of the Western Tien Shan in 1948-1969 by V. Pavlov. sought The remaining examples are M.Popov (1926), A.Butkov (1936), I.Kultiasov (1940), A.Regel (1931), I.Raykova (1926), A.D.Pyatayeva (1948), I.A. Gubanov (1965), I. Vasilchenko and L. Vasilyeva (1960-1962), M.G. Compiled by Pimenov (1988) and an unknown author (1871). It should be noted that herbarium specimens of the species of species (MW) stored in the herbarium fund and collected from the territory of the Republic of Uzbekistan were collected between 1871-1988 [https://plant.depo.msu.ru/].

As you know, the TASH Foundation is the largest herbarium fund in Central Asia. In this fund D. adylovii-3, D. bipinnatum-73, D. discolor-160, D. diversifolium- 219, D. formosum-32, D. grandiflorum- 32, D. heterophyllum- 111, D. imberbe- 176, D. integrifolium- 271, D. karataviense -13 D. komarovii- 45, D. moldavica-3, D.nodulosum- 125, D. nuratavicum-6, D.nutans-165, D.oblongifolium- 68, D. paulsenii-6, D.peregrinum-6 , D. ruyschiana-18, D. scrobiculatum- 32, D. spinulosum- 22, D. stamineum- 127, D. subcapitatum-15, D. thymiflorum– 10 samples are preserved.

According to the analysis, DracocephalumL. There are 1738 specimens of 22 species collected from Uzbekistan and neighboring regions in the TASH fund. The main part of the herbarium specimens in the TASH fund was collected from the Western Tien Shan for more than a century (1914-2016) [1; S.3-8.].

Analysis of samples of Dracocephalum L. species distributed in Uzbekistan, which are stored in the National Herbarium of the Institute of Botany of the Academy of Sciences of the Republic of Uzbekistan, shows that most of the herbarium specimens were collected before the 80s and 90s of the XX century. This, in turn, will require the replenishment of the fund with new herbarium specimens. Of course, the new information provides a clear answer to the current state and distribution of the series.

Based on the results of scientific research on the geography, ecology and importance of the species Dracocephalum distributed in Uzbekistan, 380 copies of herbarium specimens of 15 species were collected from the territory of the Republic of Uzbekistan. The distribution points of the samples collected from the Nurata and

Turkestan ridges of the Pamir Alay were identified and included in the GAT map (Figure 1).

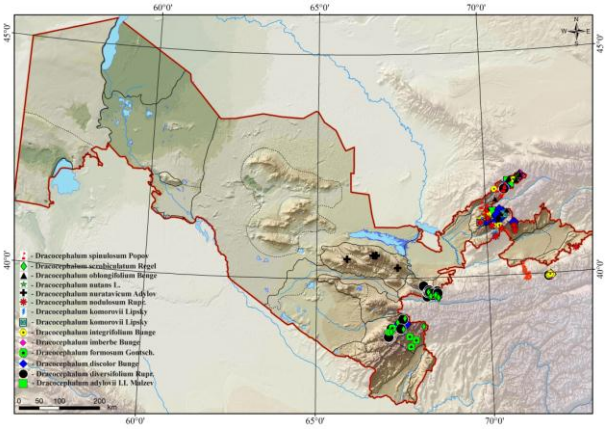

Figure 1. GAT map of the distribution of Dracocephalum L. species in the territory of the Republic of Uzbekistan

Based on the analysis of herbarium specimens stored in the Central Herbarium Fund and the results of research conducted in 2016-2018 and the data published in the literature published over several years, an electronic database "Species of Dracocephalum family in the flora of Uzbekistan" was created (Figure 2).

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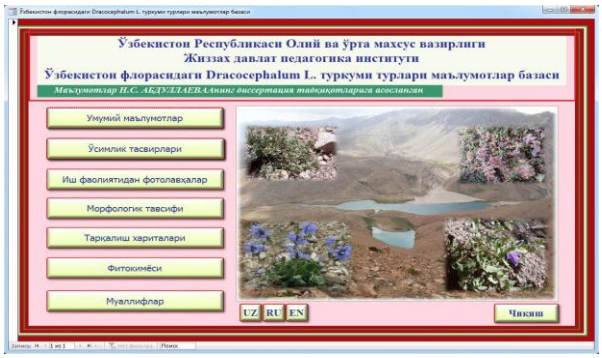

Figure 2. The main menu of the species Dracocephalum in the flora of Uzbekistan

In this case, the arrangement of the list of contents of the category A.L. Formed on a board. Each taxonomic unit is expressed in scientific, Russian and Uzbek languages.

As a result of field research conducted in recent years by the staff of the Institute of Botany and the analysis of samples stored in the TASH fund, clarification of the species composition of higher plants in the flora of Uzbekistan has been introduced. According to it, the flora of Uzbekistan consists of 4377 species of higher plants (www.floruz.uz). The flora of Uzbekistan includes species of Dracocephalum. "Database of Dracocephalum species in the flora of Uzbekistan" A7-FA-0-19606 "Botanical-geographical zoning of Uzbekistan and creation of a database of its plant diversity. Part I. This work was carried out within the framework of the project "Mountainous Central Asian Province".

The following opportunities were created for the creation of the database: - use of geographic information system (GAT);

- Analysis of the past and present status of the distribution of the species, based on satellite imagery;

- Identification of endemic species and species in need of protection.

The following conclusions are drawn from the analysis of samples of Dracocephalum species (TASH) and (MW) in the herbarium of the flora of Uzbekistan:

The results of field research and analysis of herbarium specimens in TASH, MW herbarium funds are explained by the prevalence of 15 species of the genus in the flora of Uzbekistan.

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