

The Apiaceae Family is Listed in The Red Book Of The Republic Of Uzbekistan Types Of Series

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Abstract

This article is devoted to a number of species of the Apiaceae family listed in the Red Book of the Republic of Uzbekistan. The growth dynamics, condition, and GAT maps of the Apiaceae family are presented in the Red Book of the Republic of Uzbekistan for 1984-2017.

Key words: flora, family, genus, species, monocarp

1. Introduction

Apiaceae are one of the most important families in the Uzbek hills due to their large number of species and economic importance. Representatives of this family are the most common herbaceous plants on earth, partly shrubs and hemispheres, and include about 3,500 species belonging to 300 genera. More than 205 plant species of 73 genera grow in Uzbekistan, 198 of which are wild species. The leaves of most family members are complex and cut to varying degrees. The flowers are small, white, yellow or bright red, often in the form of complex umbrellas. The length of the canopy is up to 1 m. When ripe, the fruit breaks up into 2 parts, forming a double pistachio, which hangs from the fruit. The leading families of this family are: *Coriandrum*, *Prangos*, *Petroselinum*, *Carum*, *Bunium*, *Mediasia*, *Foeniculum*, *Ferula*, *Anethum*, *Daucus*.

This family of plants differs from other families in the high content of biologically active substances. For example, it was found that *Ferula assa-foetida* L contains up to 67.31% of starch, up to 9% of tar and up to 0.4% of essential oil.

Foeniculum vulgare Mill. The fruits of the plant contain 3-6.5% of essential oil, up to 20% of fat, protein and other biologically active substances.

The fruit of *Anisum vulgare* Gaertn contains up to 67% of essential oil, 8-28.4% of fat, protein and other substances.

Bunium persicum (Boiss) B. Fedtsch contains up to 5% of essential oil, 13.6% of fat, protein and other substances. In addition to these plants, it was found that a number of other plant species contain various types of biologically active substances, and methods have been developed for their isolation from plant substances. This family also occupies a special place in the Red Book of the Republic of Uzbekistan. The Red Book of the Republic of Uzbekistan was first created in 1979, but this Red Book does not include rare and endangered species. The goal was to attract the attention of the population and government agencies. The 1984 Red Book of the Republic of Uzbekistan includes 163 endangered species. In the 1998 edition, the number of rare plants was 301. This figure includes 302 species from the 2006 edition. In the new edition of 2017, the number of species was 313.

Species and species of the Apiaceae family are included in the Red Book of the Republic of Uzbekistan. (1984-2017)

Years old	Number of categories	Number of species	%
1984	8	9	5.52%
1998	13	18	5.98%

2006	14	19	6.3%
2017	18	27	8.62%

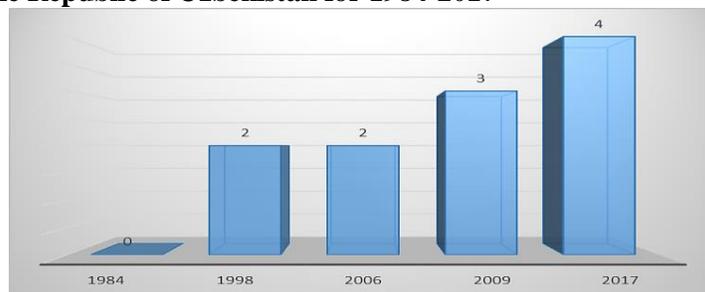
As can be seen from the table, the 1984 edition of the Red Book of the Republic of Uzbekistan includes 9 species of plants belonging to 8 genera of the *Apiaceae* family of 163 species. This is 5.52% of the species listed in the Red Book of the Republic of Uzbekistan. The number of species in the 1998 edition rose sharply to 301 in the 1984 edition. This publication included 18 plant species belonging to 13 genera from the *Apiaceae* family, accounting for 5.98%. By 2006, the *Apiaceae* family comprised 19 species, or 6.3% of 302 species in 14 genera.¹ The 2017 edition included 313 species, of which 27 species belonging to the *Apiaceae* family belong to 18 genera, and 8.62% of the species are included in the Red Book of the Republic of Uzbekistan. The number of rare and endangered species has increased dramatically in recent years, indicating the need to protect 150 species from 1984 to the present.

Leading families of the *Apiaceae* family and their share in the Red Book of the Republic of Uzbekistan.

Categories	The number of species growing in Uzbekistan	The role of the <i>Apiaceae</i> family in %	The number of species listed in the Red Book	%
<i>Ferula</i>	45	22%	8	29.6%
<i>Bunium</i>	9	4.4%	2	7.4%
<i>Oenanthe</i>	2	1%	2	7.4%
<i>Dorema</i>	2	1%	1	3.7%
<i>Seseli</i>	4	2%	1	3.7%
<i>Daucus</i>	3	1.5%	-	-

One of the leading families of the *Apiaceae* family is the *Ferula* L. family. In Uzbekistan, 45 species of this genus, which make up 22% of the flora. The number of species of ferule listed in the Red Book is 8, which is 29.6%. Nine species of the *Bunium* family are common in Uzbekistan, which is 4.4%. The number of species listed in the Red Book of this category is 2, which is 7.4%. One of the next leading series, *Oenanthe*, has 2 species in Uzbekistan and is under special protection. Another leading category is *Dorema*. Two species of this category grow in Uzbekistan, only one of which is included in the Red Book of the Republic of Uzbekistan, accounting for 3.7%. 4 species of the *Seseli* family grew by 2%. The 1st round of this category is listed in the Red Book of the Republic of Uzbekistan, which is 3.7%. There are 3 types of *Daucus* in Uzbekistan, which is 1.5%. Species belonging to this category are not included in the Red Book of the Republic of Uzbekistan.

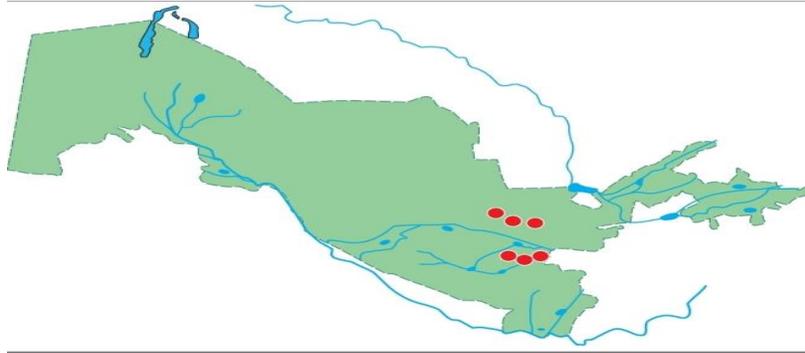
Growth dynamics of representatives of the *Apiaceae* family growing in the Jizzakh region, included in the Red Book of the Republic of Uzbekistan for 1984-2017



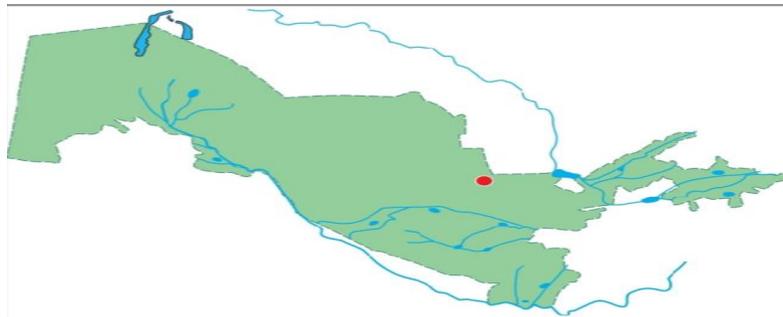
The territory of the Jizzakh region is 21.1 thousand km. The region borders on Tajikistan in the south-east, Samarkand in the south-west, Navoi region in the west and Kazakhstan and Syrdarya region in the

¹ Ўзбекистон Республикаси «Қизил китоби». 2-жилдли – Тошкент: Chino ENK, 2006. Т.1. – 343 б.

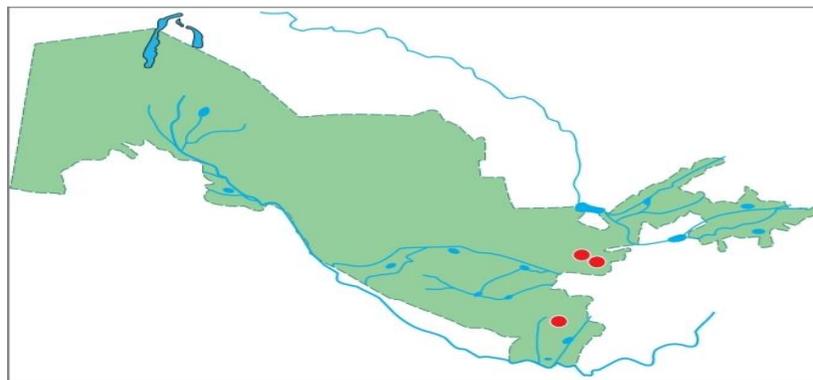
north-east. In this dynamic you can see how the number of species in the Red Book of the *Apiaceae* family in the Jizzakh region has increased over 33 years. The first edition (1984) included very few plant species from this region (a total of 15 species from leading families) and not a single *Apiaceae* family. To date, the number of protected species in the Jizzakh region of this family is 4 people. This is *Ferula sumbul* (Kauffm.) Hook. f., *Ferula fedtschenkoana* Koso-Pol. *Ferula helenae* U.Rakhmankulov et S.Melibaev, *Seseli turbinatum* Korovin.



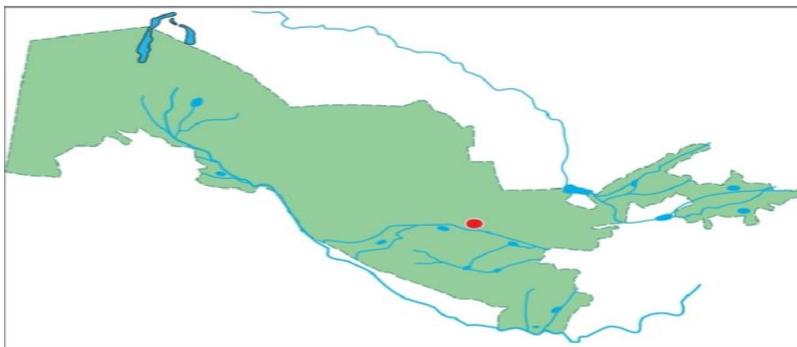
Ferula sumbul (Kauffm.) Hook. f. - a very rare perennial herb up to 150 cm high, distributed in the Jizzakh, Samarkand, Kashkadarya and Surkhandarya regions.



Ferula fedtschenkoana Koso-Pol. - perennial plant with a small amount (2-3 plants per 10 × 10 m) in the Jizzakh, Kashkadarya and Surkhandarya regions.



Ferula helenae U.Rakhmankulov et S.Melibaev is a perennial single-fruited plant 60-70 cm high, common in the pre-Ural foothills (Baliklitog, Egarbelistog) of the Jizzakh region.



Seseli turbinatum Korovin is a perennial herbaceous plant up to 1 m high, common in the Nurata ridge (Mount Koytash, Ustikhon River) of the Jizzakh region.

In conclusion, over the next 10 years, as a result of the development of new lands, grazing, non-compliance with the rules for collecting resins and essential oils from plants, great damage is done to the vegetation. Some rare and endangered species in the flora disappear, and some plant species are preserved with the necessary precautions. A number of measures should be developed to prevent such adverse events, and the following can be recommended.

- Explore the flora of the area before exploring new lands.
- Observe special rules when collecting medicinal plants.
- Advocating the importance of rare and endangered species.
- Take measures for propagation by sowing the seeds of the plants under discussion.

If we study the species in the flora and give recommendations for their protection, we will prevent a radical change in the flora and vegetation of Uzbekistan.

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