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## TAXONOMIC COMPOSITION AND LIFE FORMS OF THE FAMILY ASTERACEAE SPREADING IN DARIDAGH MASSIF AREA

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## ТАКСОНОМИЧЕСКИЙ СОСТАВ И ЖИЗНЕННЫЕ ФОРМЫ ВИДОВ СЕМЕЙСТВА ASTERACEAE, РАСПРОСТРАНЕННЫХ НА ТЕРРИТОРИИ МАССИВА ДАРЫДАГ

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*Abstract.* The article provides information on the taxonomic composition and life forms of the Family Asteraceae Dumort, which is widespread in the Daridagh Massif area. During our research, 43 species belonging to 23 Genera of the Family Asteraceae Dumort spreaded in the Daridagh Massif area. Also, a comparative analysis of the number of species belonging to the Family and their life forms were studied. According to the analysis of the number of species of the Genera *Helichrysum* Mill. — 2 (4.65%), *Taraxacum* Wigg. — 2 (4.65%), *Centaurea* L. — 3 (6.97%), *Carduus* L. — 3 (6.97%), *Achillea* L. — 3 (6.97%), *Scorzonera* L. — 6 (13.95%) and *Tragopogon* L. — 8 (18.6%) species are the main predominant species in the Daridagh Massif area and are represented by 27 (62.79%) species. The remaining Genera are monotype and consist of 16 (37.20%) species.

*Аннотация.* В статье приводится информация о таксономическом составе и жизненных формах семейства Астровые, виды которого широко распространены на территории массива Дарыдаг. В ходе наших исследований было выявлено 43 вида, относящихся к 23 родам семейства Астровые. Кроме того, был проведен сравнительный анализ видов, принадлежащих к семейству и их форм жизни. Род *Helichrysum* Mill. представлен 2-мя (4,65%) видами, *Taraxacum* Wigg. — 2-мя (4,65%), *Centaurea* L. — 3-мя (6,97%), *Carduus* L. — 3-мя (6,97%), *Achillea* L. — 3-мя (6,97%), *Scorzonera* L. — 6-ю (13,95%) и *Tragopogon* L. — 8-ю (18,6%) видами, являющихся основными преобладающими на территории массива Дарыдаг (всего 27 видов или 62,79%). Остальные 16 родов являются монотипными — (37,20%) видов.

*Keywords:* Daridagh Massif, taxonomic structure, comparative analysis, life forms, number of species.

*Ключевые слова:* массив Дарыдаг, таксономическая структура, сравнительный анализ, жизненные формы, количество видов.

### Introduction

One of the largest families in the class Asteraceae Dumort is a family of Asteraceae. There are found 1,100 genera and about 25,000 species in the world. From this family, 584 species of 125 genera and 15 species of 10 genera are cultivated in Azerbaijan. It is a cosmopolitan family and spread almost everywhere on the Earth, except in the poles, in all climatic zones. It is mainly found in temperate and subtropical climates. Representatives of the family are found in a variety of



environmental conditions (meadows, dry slopes, semi-deserts, weed-like crops, waste areas, etc.) from the lowlands to the upper mountain range. It is sometimes found on forest edges. Rock species growing in the forests are rare. Some species of the genus have spread throughout the world as a result of human and bird migration. Most are herbaceous plants, sometimes found in shrubs, trees and lianas. There are industrial, medical, nectariferous and decorative types.

#### *Material and methodology of research*

During our research, it was determined that one of the leading families in the Daridagh massif, which was selected as the research area, was the Asteraceae family. The main research object was selected around the Daridagh physiotherapy hospital building located on the south-western slope of the Daridagh range and the area called Pir plain and Chakhchakh.

Herbarium specimens of the species belonging to that family were collected, and a taxonomic spectrum was compiled. During the analysis of species, Flora Of Azerbaijan [1], Analysis Of Flora Of The Caucasus [2] and Flora Of The Caucasus [3] by A. Grossgeim, Flora Of The USSR [4], Taxonomic Spectrum Of Flora Of Nakhchivan Autonomous Republic by T. Talibov and A. Ibrahimov [5], Plant World Of Azerbaijan [6] by A. Askerov and a number of scientific works were used.

#### *Experimental part*

The Asteraceae Dumort family was formerly known as the Compositae Adans family and was divided into two subfamilies: Asteroideae (or Tubuliflorae) and Cichorioideae (or Liguliflorae).

Currently, Compositae is known as an alternative name and consists of 13 subfamilies: Barnadesioideae, Famatinanthoideae, Mutisioideae, Stifftioideae, Wunderlichioideae, Gochnatioideae, Hecastocleidoideae, Carduoides, Pertyoideae, Gymnarrhenioideae, Cichorioideae, Corymbioideae, Asteroideae. One of the subspecies Famatinanthoideae is a monotype and the family includes a species belonging to the same genus. The subfamilies Asteroideae, Cichorioideae, Carduoides and Mutisioideae make up 99% of the species diversity of the whole family.

During our research in the Daridagh area, 43 species belonging to 23 genera within the Asteraceae Dumort family were found, which are also part of the Asteroideae and Cichorioideae subfamilies.

Comparative analysis of the number of species belonging to the Asteraceae Dumort family spreading in the Daridagh area was studied (Table).

Table.

SPREADING OF SPECIES BELONGING  
TO THE FAMILY ASTERACEAE DUMORT IN DARIDAGH AREA

<i>Genus</i>	<i>Species</i>	<i>By %</i>
<i>Achillea</i> L.	3	6.97
<i>Artemisia</i> L.	1	2.32
<i>Carduus</i> L.	3	6.97
<i>Carlina</i> L.	1	2.32
<i>Carthamus</i> L.	1	2.32
<i>Centaurea</i> L.	3	6.97
<i>Chamaemelum</i> Mill.	1	2.32
<i>Chondrilla</i> L.	1	2.32
<i>Cicerbita</i> Wallr.	1	2.32
<i>Cirsium</i> Hill.	1	2.32
<i>Cnicus</i> L.	1	2.32
<i>Cousinia</i> Cass.	1	2.32



Genus	Species	By %
<i>Crepis</i> L. ( <i>Barkhausia</i> Moench)	1	2.32
<i>Filago</i> L.	1	2.32
<i>Helichrysum</i> Mill.	2	4.65
<i>Jurinea</i> Cass.	1	2.32
<i>Koelipinia</i> Pall.	1	2.32
<i>Matricaria</i> L. ( <i>Chamomilla</i> S. F. Gray)	1	2.32
<i>Onopordum</i> L.	1	2.32
<i>Scorzonera</i> L.	6	13.95
<i>Senecio</i> L.	1	2.32
<i>Taraxacum</i> Wigg.	2	4.65
<i>Tragopogon</i> L.	8	18.6
Total	43	100

It is clear from the table that *Helichrysum* Mill. — 2 (4.65%), *Taraxacum* Wigg. — 2 (4.65%), *Centaurea* L. — 3 (6.97%), *Carduus* L. — 3 (6.97%), *Achillea* L. — 3 (6.97%), *Scorzonera* L. — 6 (13.95%) and *Tragopogon* L. — 8 (18.6%) species are the main predominant species in the Daridagh area and are represented by 27 (62.79%) species. The remaining genera are monotype and consist of 16 (37.20%) species. Thus, *Matricaria* L. (*Chamomilla* S. F. Gray) was found in the southwest of the Physiotherapy Hospital building, *Tragopogon* L., *Scorzonera* L., *Cnicus* L. in the south-east, *Senecio* L. in the north-west, and *Helichrysum* Mill. in the Pir plain and other species are found.

Representatives of the family consist mainly of perennial grasses. The analysis of the main life forms of the species belonging to the Asteraceae Dumort family spreading in the territory of Daridagh was carried out on the basis of the classification systems of I. Serebryakov and C. Raunkiaer [7–8].

According to the analysis of life forms, 8 species (18.60%) of the Asteraceae Dumort family are annual grasses, 9 species (20.93%) are biennial grasses, and 26 species (60.46%) are perennial grasses. Annual grasses include — *Carthamus glaucus* Bieb., *Chamaemelum praecox* (Bieb.) Vis., *Cnicus benedictus* L., *Crepis pulchra* L., *Filago arvensis* L., *Koelipinia linearis* Pall., *Matricaria recutita* L., *Senecio vernalis* Waldst. & Kit species.

Biennial grasses include — *Carduus thoermeri* Weinm., *C. onopordioides* Fish. ex Bieb., *C. adpressus* C. A. Mey., *Carlina onopordifolia* Bess. ex Szaf., *Onopordum acanthium* L., *Scorzonera laciniata* L., *Tragopogon buphthalmoides* (DC.) Boiss., *T. latifolius* Boiss., *T. coloratus* C. A. Mey species. Other species are perennial grasses.

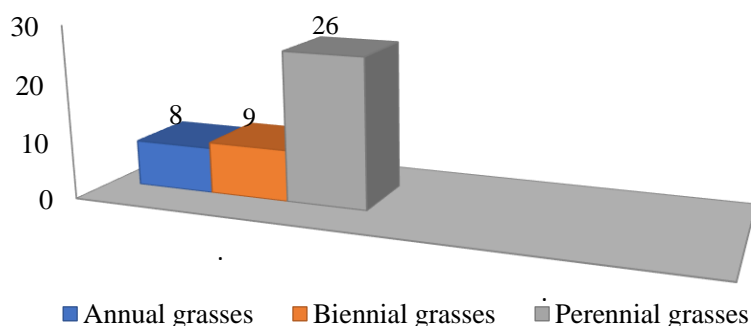


Figure. Life forms of species belonging to the Asteraceae Dumort family spreading in the Daridagh area according to the Serebryakov system.

Out of the species spreading in the Daridagh area, belonging to the Asteraceae Dumort family, the followings are herbs of medical significance: *Achillea millefolium* L., *Cnicus benedictus* L., *Matricaria recutita* L., *Taraxacum officinale* Wigg. [9–11].

### Conclusion

During our researches in the Daridagh area, 43 species belonging to 23 genera of the Asteraceae family were identified, as well as comparative analysis of the number of species belonging to the family and their life forms were studied.

### References

1. Flora Azerbaidzhana. (1950-1961). Akad. nauk Azerbaidzh. SSR. In-t botaniki im. V. L. Komarova. Baku. (in Russian).
2. Grossgeim, A. A. (1936). Analiz flory Kavkaza. *Trudy Botanicheskogo instituta Azerb. FAN SSSR*, 1. Baku. (in Russian).
3. Grossgeim, A. A. (1952). Flora of the Caucasus. *Trudy Botanicheskogo instituta Azerb. FAN SSSR*, 5. Baku. (in Russian).
4. Flora of the USSR (1934-1967). 13. Moscow. (in Russian).
5. Talibov T. H., Ibrahimov A. Sh. (2008). Taxonomic flora of the Nakhchivan Autonomous Republic spectrum (Higher spore, bare-seeded and covered-seeded plants). Nakhchivan. (in Azerbaijani).
6. Askerov, A. M. (2016) Flora of Azerbaijan. Baku. (in Azerbaijan).
7. Raunkiaer, C. (1934). The life form of plants and their bearing on geography, collected papers.
8. Serebryakov, I. G. (1964). Zhiznennye formy vysshikh rastenii i ikh izuchenie. *Polevaya geobotanika*, 3, 146-205.
9. Okunade, A. L. (2002). *Ageratum conyzoides* L. (Asteraceae). *Fitoterapia*, 73(1), 1-16. [https://doi.org/10.1016/S0367-326X\(01\)00364-1](https://doi.org/10.1016/S0367-326X(01)00364-1)
10. Bremer, K. (1987). Tribal interrelationships of the Asteraceae. *Cladistics*, 3(3), 210-253. <https://doi.org/10.1111/j.1096-0031.1987.tb00509.x>
11. Wagenitz, G. (1976). Systematics and phylogeny of the Compositae (Asteraceae). *Plant Systematics and Evolution*, 125(1), 29-46. <https://doi.org/10.1007/BF00986129>

### Список литературы:

1. Флора Азербайджана / Акад. наук Азербайдж. ССР. Ин-т ботаники им. В. Л. Комарова. Баку: Изд-во Акад. наук АзССР, 1950-1961. 8 т.
2. Гроссгейм А. А. Анализ флоры Кавказа: монография. Т. 1 Баку: Издательство Азербайджанского филиала Академии Наук СССР, 1936. 260 с.
3. Гроссгейм А. А. Флора Кавказа // Труды Ботанического института АН АзССР. Баку. 1952.
4. Флора СССР. В 30-х гг. Т. 13. М.-Л., 1934-1967.
5. Талибов Т. Х., Ибрагимов А. Ш. Таксономическая флора спектра Нахичеванской Автономной Республики (высшие споровые, голосеменные и покрытосеменные). Нахичевань, 2008.
6. Аскеров А. М. Флора Азербайджана. Баку. 2016.
7. Raunkiaer C. The life form of plants and their bearing on geography, collected papers. 1934.

8. Серебряков И. Г. Жизненные формы высших растений и их изучение // Полевая геоботаника. 1964. Т. 3. С. 146-205.
9. Okunade A. L. *Ageratum conyzoides* L. (Asteraceae) // *Fitoterapia*. 2002. V. 73. №1. P. 1-16. [https://doi.org/10.1016/S0367-326X\(01\)00364-1](https://doi.org/10.1016/S0367-326X(01)00364-1)
10. Bremer K. Tribal interrelationships of the Asteraceae // *Cladistics*. 1987. V. 3. №3. P. 210-253. <https://doi.org/10.1111/j.1096-0031.1987.tb00509.x>
11. Wagenitz G. Systematics and phylogeny of the Compositae (Asteraceae) // *Plant Systematics and Evolution*. 1976. V. 125. №1. P. 29-46. <https://doi.org/10.1007/BF00986129>

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