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**PARTICIPATION OF SPECIES OF THE FAMILY Brassicaceae Burnett
IN SPRING PHYTOCENOSIS OF THE LOWLAND ZONE
OF THE NAKHCHIVAN AUTONOMOUS REPUBLIC**

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**УЧАСТИЕ ВИДОВ СЕМЕЙСТВА Brassicaceae Burnett В ВЕСЕННИХ ФИТОЦЕНОЗАХ
НИЗМЕННОЙ ЗОНЫ НАХЧЫВАНСКОЙ АВТОНОМНОЙ РЕСПУБЛИКИ**

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Abstract. The spring flora of the lowland part of the Nakhchivan Autonomous Republic was studied. The role of representatives of the family Brassicaceae Burnett in the spring flora was determined. The phytocenosis, including representatives of the family Brassicaceae Burnett, consists of 15 perennial species (41.66%), 13 annual species (36.11%), 3 biennial species (8.33%), one species that is either annual or biennial (2.77%), and among the woody representatives, one species (2.77%) is a tree and 3 species (8.33%) are shrubs. By ecological group, 17 species (47.22%) are mesophytes, 12 species (33.33%) are xerophytes, 3 species (8.33%) are xeromesophytes, 2 species (5.55%) are mesoxerophytes, 1 species (2.77%) is a hydromesophyte, and 1 species (2.77%) is a hydrophyte. Perennials predominate by life form, and mesophytes predominate by ecological group. The plants that form the phytocenosis mainly belong to the family Asteraceae Bercht. & J.Presl (12 species - 33%). The coordinates of the site where the phytocenosis with representatives of the family Brassicaceae Burnett is located in the lowland zone of the Autonomous Republic were identified using GPS: 39°4'49.73952" N, 45°33'56.19276" E, 956 m above sea level. Other significant representatives of the spring flora of the lowland part of the Autonomous Republic are also present here.

Аннотация. Рассматривается весенняя флора низменной части Нахчыванской автономной Республики. Определена роль представителей семейства Brassicaceae Burnett. в весенней флоре. Фитоценоз, включающий представителей семейства Brassicaceae Burnett., состоит из 15 многолетних видов (41,66%), 13 однолетних видов (36,11%), 3 двулетних видов (8,33%), одного вида, являющегося либо однолетним, либо двулетним (2,77%), а среди древесных представителей один вид (2,77%) — дерево, и 3 вида (8,33%) — кустарники. По экологическим группам 17 видов (47,22%) — мезофиты, 12 видов (33,33%) — ксерофиты, 3 вида (8,33%) — ксеромезофиты, 2 вида (5,55%) — мезоксерофиты, 1 вид (2,77%) — гидромезофит, и 1 вид (2,77%) — гидрофит. По жизненным формам преобладают многолетние растения, а по экологическим группам — мезофиты. Растения, образующие фитоценоз, в основном принадлежат к семейству Asteraceae Bercht. & J.Presl (12 видов — 33%). Координаты участка, где расположен фитоценоз с представителями семейства Brassicaceae Burnett. в низменной зоне Автономной Республики, также определены с помощью GPS: 39°4'49.73952" с.ш., 45°33'56.19276" в.д., 956 м над уровнем моря. Здесь также представлены значимые представители растений весенней флоры низменной части Автономной Республики.

Keywords: *Brassicaceae* Burnett., phytocoenosis, family, genus, species, plant.

Ключевые слова: *Brassicaceae* Burnett., фитосеноз, семейство, род, вид, растение.

Spring is the season in which nature awakens, vegetation develops most actively, and biodiversity increases. Each region has its own unique climatic conditions, soil types, and ecosystem characteristics. Consequently, spring flora differs from region to region. Spring flora is ecologically and biologically significant. Plants that undergo their phenophases in spring serve as a primary food source for insects, help prevent soil erosion, improve air quality, and play an important role in maintaining ecological balance.

Materials and methods

The subject of this research is the representatives of the *Brassicaceae* Burnett family. The study area encompasses the spring flora of the lowland zone of the Nakhchivan Autonomous Republic. The species names within the phytocoenoses featuring members of the *Brassicaceae* family in the spring flora of this area were clarified using identification keys and online sources [1-4, 7, 9-11].

Life forms were determined through long-term observations, while ecological groups were identified based on the environments in which they are distributed.

Results and discussion

Among the plants belonging to the spring flora, representatives of the *Brassicaceae* Burnett family also actively participate. Considering that the species representing this family are mainly annuals in terms of life form, they hold a significant position in the spring flora [8, 10, 11]. In the spring flora of the lowland zone of the region, representatives of the *Brassicaceae* Burnett family are mostly from the genera *Alyssum* L., *Capsella* Medik., *Chorispora* R. Br. ex DC., *Erysimum* L., *Sinapis* L., and *Lepidium* L. These include species such as *Alyssum turkestanicum* Regel & Schmalh. (syn. *A. desertorum* Stapf), *Capsella bursa-pastoris* (L.) Medik., *Chorispora tenella* (Pall.) DC., *Erysimum repandum* L., *Sinapis arvensis* L., and *Lepidium campestre* (L.) R.Br. (Figure 1-3)



Figure 1. *Chorispora tenella* (Pall.) DC.



Figure 2. *Alyssum turkestanicum* Regel & Schmalh. (*A. desertorum* Stapf)



Figure 3. *Sinapis arvensis* L.

Table

SPECIES COMPOSITION OF THE LOWLAND ZONE

<i>Familia</i>	<i>Genus</i>	<i>Species</i>	<i>Life form</i>	<i>Ecogroup</i>
<i>Aceraceae</i> Juss.	<i>Acer</i> L.	<i>Acer negundo</i> L.	Tree	Mesophyte
<i>Sambucaceae</i> Batsch ex Borkh.	<i>Sambucus</i> L.	<i>Sambucus ebulus</i> L.	Shrub	Mesophyte
<i>Tamaricaceae</i> Link.	<i>Tamarix</i> L.	<i>Tamarix ramosissima</i> Ledeb.	Shrub	Xerophyte
<i>Tamaricaceae</i> Link.	<i>Tamarix</i> L.	<i>Tamarix Meyeri</i> Boiss.	Shrub	Xerophyte
<i>Hyacinthaceae</i> Batsch	<i>Muscari</i> Mill.	<i>Muscari caucasicum</i> (Criseb.) Baker.	Perennial	Mesophyte
<i>Poaceae</i> Barnhart	<i>Avena</i> L.	<i>Avena fatua</i> L.	Annual	Mesophyte
	<i>Aegilops</i> L.	<i>Aegilops tauschii</i> Coss.	Annual or biennial	Mesophyte

<i>Familia</i>	<i>Genus</i>	<i>Species</i>	<i>Life form</i>	<i>Ecogroup</i>	
<i>Lythraceae</i> J.St.-Hil.	<i>Lythrum</i> L.	<i>Lythrum hyssopifolia</i> L.	Annual	Hydromesophyte	
<i>Boraginaceae</i> Juss.	<i>Echium</i> L.	<i>Echium vulgare</i> L.	Biennial	Mesophyte	
<i>Boraginaceae</i> Juss.	<i>Nonea</i> Medik	<i>Nonea pulla</i> (L.) DC.	Perennial	Mesophyte	
	<i>Buglossoides</i> Moench	<i>Buglossoides arvensis</i> (L.) Johnst.	Annual	Mesophyte	
<i>Caryophyllaceae</i> Juss.	<i>Arenaria</i> L.	<i>Arenaria serpyllifolia</i> L.	Annual	Xerophyte	
<i>Euphorbiaceae</i> Juss.	<i>Euphorbia</i> L.	<i>Euphorbia helioscopia</i> L.	Annual	Mesophyte.	
<i>Asteraceae</i> Bercht. & J.Presl	<i>Cirsium</i> Hill	<i>Cirsium vulgare</i> (Savi) Ten.	Biennial	Xerophyte	
	<i>Bellis</i> L.	<i>Bellis perennis</i> L.	Perennial	Mesophyte	
	<i>Artemisia</i> L.	<i>Artemisia absinthium</i> L.	Perennial	Mesoxerophyte	
	<i>Senecio</i> L.	<i>Senecio vernalis</i> Waldst. & Kit.	Annual	Xeromesophyte	
		<i>Senecio racemosus</i> (Bieb.) DC.	Perennial	Mesophyte	
		<i>Senecio Lipskyi</i> Lomak.	Perennial	Xerophyte	
	<i>Bidens</i> L.	<i>Bidens, tripartita</i> L.	Annual	Hydrophyte	
	<i>Matricaria</i> L.	<i>Matricaria recutita</i> L.	Annual	Mesophyte	
	<i>Anthemis</i> L.	<i>Anthemis cretica</i> L.	Perennial	Mesoxerophyte	
	<i>Cirsium</i> Hill	<i>Cirsium arvense</i> (L.) Scop.	Perennial	Mesophyte	
	<i>Ambrosia</i> L.	<i>Ambrosia confertiflora</i> DC.	Perennial	Xerophyte	
	<i>Taraxacum</i> Wigg.	<i>Taraxacum officinale</i> Wigg.	Perennial	Mesophyte	
	<i>Apiaceae</i> Lindl.	<i>Daucus</i> L.	<i>Daucus carota</i> L.	Biennial	Mesophyte
		<i>Pseudorlaya</i> Maire	<i>Pseudorlaya pumila</i> (L.) Grande (syn. <i>Daucus pumilus</i> (L.) Hoffm. & Link)	Annual	Xerophyte
<i>Geraniaceae</i> Juss.	<i>Erodium</i> L'Her.	<i>Erodium cicutarium</i> (L.) L'Her.	Annual	Xeromesophyte	
<i>Convolvulaceae</i> Juss.	<i>Convolvulus</i> L.	<i>Convolvulus arvensis</i> L.	Perennial	Xerophyte	
<i>Amaryllidaceae</i> J.St.-Hil.	<i>Allium</i> L.	<i>Allium schoenoprasum</i> L.	Perennial	Xerophyte	
<i>Fabaceae</i> Lindl.	<i>Medicago</i> L.	<i>Medicago littoralis</i> Lois.	Annual	Xerophyte	
	<i>Tylosema</i> (Schweinf.) Torre & Hille.	<i>Tylosema esculentum</i> (Burch.) A.Schreib.	Perennial	Xerophyte	
	<i>Hedysarum</i> L.	<i>Hedysarum caucasicum</i> Bieb.	Perennial	Mesophyte	
<i>Papaveraceae</i> Juss.	<i>Papaver</i> L.	<i>Papaver rhoeas</i> L.	Annual	Xeromesophyte	
<i>Polygonaceae</i> Juss.	<i>Rumex</i> L.	<i>Rumex crispus</i> L.	Perennial	Mesophyte	
<i>Zygophyllaceae</i> R.Br.	<i>Tribulus</i> L.	<i>Tribulus terrestris</i> L.	Annual	Xerophyte	

Other plant species are also present in the phytocoenosis in which these species occur. Information about this phytocoenosis and its species composition is provided in the Table below [3, 5, 6].

Conclusion

In the spring flora of the lowland zone of the region, the phytocoenosis involving representatives of the *Brassicaceae* Burnett. family consists of 15 perennial species (41.66%), 13

annual species (36.11%), 3 biennial species (8.33%), one species that is either annual or biennial (2.77%), and among the woody representatives, one species (2.77%) is a tree, and 3 species (8.33%) are shrubs. According to ecological groups, 17 species (47.22%) are mesophytes, 12 species (33.33%) are xerophytes, 3 species (8.33%) are xeromesophytes, 2 species (5.55%) are mesoxerophytes, 1 species (2.77%) is a hydromesophyte, and 1 species (2.77%) is a hydrophyte. In terms of life forms, perennials dominate, while in terms of ecological groups, mesophytes are predominant. The plants forming the phytocoenosis are mostly from the *Asteraceae* Bercht. & J.Presl family (12 species – 33%). The coordinates of the area where the phytocoenosis involving representatives of the *Brassicaceae* Burnett. family is located in the lowland zone of the Autonomous Republic have also been determined using GPS: 39°4'49.73952" N, 45°33'56.19276" E, 956 m a.s.l. Here are also significant representatives among the plants forming the phytocoenosis in the spring flora of the lowland zone of the Autonomous Republic.

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