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**STUDY OF PHYTOCENOSIS WITH DOMINANCE OF SPECIES OF THE FAMILY  
Brassicaceae Burnett IN THE NAKHCHIVAN AUTONOMOUS REPUBLIC**

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**ИССЛЕДОВАНИЕ ФИТОЦЕНОЗА С ДОМИНИРОВАНИЕМ ВИДОВ СЕМЕЙСТВА  
Brassicaceae Burnett В НАХЧЫВАНСКОЙ АВТОНОМНОЙ РЕСПУБЛИКЕ**

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*Аннотация.* Рассматривается фитоценоз с доминированием видов семейства *Brassicaceae* Burnett. В этом сообществе ведущие позиции занимают виды из родов *Alyssum* L., *Arabidopsis* (DC.) Heynh., *Chorispora* R. Br. ex DC., *Conringia* Adans., *Lepidium* L., *Neslia* Desv., *Sinapis* L. и *Sisymbrium* L. В исследовании особое внимание уделено видам *Alyssum turkestanicum* Regel & Schmalh. (син. *A. desertorum* Stapf), *Arabidopsis Thaliana* (L.) Heynh., *Chorispora tenella* (Pall.) DC., *Conringia orientalis* (L.) Dumort., *Lepidium draba* L., *Lepidium vesicarium* L., *Neslia paniculata* (L.) Desv., *Sinapis arvensis* L. и *Sisymbrium Irio* L., а также сопутствующим видам растений, совместно встречающимся в данной среде обитания. Составлена таблица с информацией о растениях, формирующих фитоценоз, их жизненных формах и экологических группах.

*Abstract.* The article concerns a phytocoenosis dominated by species belonging to the family *Brassicaceae* Burnett. Within this community, species from the genera *Alyssum* L., *Arabidopsis* (DC.) Heynh., *Chorispora* R. Br. ex DC., *Conringia* Adans., *Lepidium* L., *Neslia* Desv., *Sinapis* L., and *Sisymbrium* L. occupy leading positions. The study focuses on species such as *Alyssum turkestanicum* Regel & Schmalh. (syn. *A. desertorum* Stapf), *Arabidopsis Thaliana* (L.) Heynh., *Chorispora tenella* (Pall.) DC., *Conringia orientalis* (L.) Dumort., *Lepidium draba* L., *Lepidium vesicarium* L., *Neslia paniculata* (L.) Desv., *Sinapis arvensis* L., and *Sisymbrium Irio* L., as well as associated plant species co-occurring within the same habitat. A table has been prepared to provide information on the plant species forming the phytocoenosis, their life forms, and ecological groupings.

*Ключевые слова:* *Brassicaceae* Burnett., фитоценоз, семейство, вид, растение.

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

Plants in nature do not occur individually, but rather in specific groupings known as phytocoenoses. A phytocoenosis, which is the totality of plant species coexisting within a certain area, plays a key role in the structure of the landscape, the maintenance of ecological balance, and the formation of habitats for living organisms. Naturally, plant species belonging to various families are represented within these phytocoenoses [1, 2, 9].

*Materials and methods*

The object of the study is a phytocoenosis dominated by species belonging to the family

*Brassicaceae* Burnett., including *Alyssum turkestanicum* Regel & Schmalh. (syn. *A. desertorum* Stapf), *Arabidopsis thaliana* (L.) Heynh., *Chorispora tenella* (Pall.) DC., *Conringia orientalis* (L.) Dumort., *Lepidium draba* L., *Lepidium vesicarium* L., *Neslia paniculata* (L.) Desv., *Sinapis arvensis* L., and *Sisymbrium irio* L. The latin names of the species were recorded based on literature sources [2-7].

Based on long-term research, the life forms and ecological groupings of the species forming the phytocoenosis, in relation to moisture preference, were determined. The species within the phytocoenosis were identified and verified using diagnostic keys [8, 9].

### Discussion

During the research, a phytocoenosis was identified in which species of the family *Brassicaceae* Burnett were particularly abundant within the local flora. This phytocoenosis includes species from the genera *Alyssum* L., *Arabidopsis* (DC.) Heynh., *Chorispora* R. Br. ex DC., *Conringia* Adans., *Lepidium* L., *Neslia* Desv., *Sinapis* L., and *Sisymbrium* L. In the flora of the Nakhchivan Autonomous Republic, there are 13 species of the genus *Alyssum* L., 3 species of *Arabidopsis* (DC.) Heynh., 2 species of *Chorispora* R. Br. ex DC., 4 species of *Conringia* Adans., 10 species of *Lepidium* L., 2 species of *Neslia* Desv., 1 species of *Sinapis* L., and 4 species of *Sisymbrium* L. [2].

The phytocoenosis includes the following species: *Alyssum turkestanicum* Regel & Schmalh. (syn. *A. desertorum* Stapf), *Arabidopsis thaliana* (L.) Heynh., *Chorispora tenella* (Pall.) DC., *Conringia orientalis* (L.) Dumort., *Lepidium draba* L., *Lepidium vesicarium* L., *Neslia paniculata* (L.) Desv., *Sinapis arvensis* L., and *Sisymbrium irio* L. Information regarding the species composition of the phytocoenosis involving the mentioned species is presented in the following Table.

Table

THE SPECIES COMPOSITION OF THE PHYTOCOENOSIS DOMINATED BY SPECIES  
OF THE *Brassicaceae* Burnett. FAMILY

№	Familia	Genus	Species	Life form	Ecogroup
1.	<i>Aceraceae</i> Juss.	<i>Acer</i> L.	<i>Acer sacchorinum</i> L.	Tree	Mesophyte
2.	<i>Salicaceae</i> Mirb.	<i>Populus</i> L.	<i>Populus gracilis</i> Grossh.	Tree	Mesophyte
3.	<i>Elaeagnaceae</i> Adans.	<i>Elaeagnus</i> L.	<i>Elaeagnus angustifolia</i> L.	Tree	Mesoxerophyte
4.	<i>Tamaricaceae</i> Link.	<i>Tamarix</i> L.	<i>Tamarix ramosissima</i> Ledeb.	Shrub	Xerophyte
5.	<i>Zygophyllaceae</i> R.Br.	<i>Zygophyllum</i> L.	<i>Zygophyllum fabago</i> L.	Shrub	Xerophyte
6.	<i>Rosaseae</i> Juss.	<i>Holodiscus dumosus</i> (K.Koch) Maxim	<i>Holodiscus dumosus</i> (Nutt ex Hook) A.Heller	Shrub	Mesophyte
7.	<i>Poaceae</i> Barnhart	<i>Hordeum</i> L.	<i>Hordeum murinum</i> L.	Annual	Mesoxerophyte
8.	<i>Poaceae</i> Barnhart	<i>Anthoxanthum</i> L.	<i>Anthoxanthum</i> <i>odoratum</i> L.	Perennial	Mesophyte
9.	<i>Poaceae</i> Barnhart	<i>Bromus</i> L.	<i>Bromus arvensis</i> L.	Annual	Mesophyte
10.	<i>Poaceae</i> Barnhart	<i>Elytrigia</i> Desv.	<i>Elytrigia repens</i> (L.) Nevski	Perennial	Xeromesophyte
11.	<i>Poaceae</i> Barnhart	<i>Phleum</i> L.	<i>Phleum Bertolonii</i> DC	Perennial	Mesophyte
12.	<i>Boraginaceae</i> Juss.	<i>Onosma</i> Levin	<i>Onosma caucasica</i> Levin	Perennial	Xerophyte
13.	<i>Boraginaceae</i> Juss.	<i>Lappula</i> Moench	<i>Lappula patula</i> Menyharth	Annual	Xerophyte

№	Familia	Genus	Species	Life form	Ecogroup
14.	<i>Caryophyllaceae</i> Juss.	<i>Arenaria</i> L.	<i>Arenaria serpyllifolia</i> L.	Annual	Xerophyte
15.	<i>Caryophyllaceae</i> Juss.	<i>Cerastium</i> L.	<i>Cerastium Szowitsii</i> Boiss	Perennial	Xerophyte
16.	<i>Euphorbiaceae</i> Juss.	<i>Euphorbia</i> L.	<i>Euphorbia helioscopia</i> L.	Annual	Mesophyte.
17.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Artemisia</i> L.	<i>Artemisia vulgaris</i> L.	Perennial	Mesoxerophyte
18.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Senecio</i> L.	<i>Senecio vernalis</i> Waldst. & Kit.	Annual	Xeromesophyte
19.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Senecio</i> L.	<i>Senecio orientalis</i> Willd.	Perennial	Mesophyte
20.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Senecio</i> L.	<i>Senecio Lipskyi</i> Lomak.	Perennial	Xerophyte
21.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Taraxacum</i> Wigg.	<i>Taraxacum officinale</i> Wigg.	Perennial	Mesophyte
22.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Achillea</i> L.	<i>Achillea millefolium</i> L.	Perennial	Xeromesophyte
23.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Carduus</i> L.	<i>Carduus nervosus</i> C.Koch	Perennial	Xerophyte
24.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Pyrrhopappus</i> DC.	<i>Pyrrhopappus</i> <i>carolinianus</i> (Walter) DC.	Annual	Mesoxerophyte
25.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Tussilago</i> L.	<i>Tussilago farfara</i> L.	Perennial	Mesophyte
26.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Erigeron</i> L.	<i>Erigeron caucasicus</i> Stev.	Perennial	Xerophyte
27.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Nothocalais</i> (A.Gray) Greene	<i>Nothocalais alpestris</i> (A.Gray) K.L. Chambers	Perennial	Xerophyte
28.	<i>Asteraceae</i> Bercht. & J.Presl	<i>Sonchus</i> L.	<i>Sonchus oleraceus</i> L.	Annual	Xeromesophyte
29.	<i>Apiaceae</i> Lindl.	<i>Daucus</i> L.	<i>Daucus carota</i> L.	Biennial	Mesophyte
30.	<i>Rubiaceae</i> Juss.	<i>Galium</i> L.	<i>Galium aparine</i> L.	Annual or perennial	Mesophyte
31.	<i>Geraniaceae</i> Juss.	<i>Erodium</i> L'Her.	<i>Erodium cicutarium</i> (L.) L'Her.	Annual	Xeromesophyte
32.	<i>Fabaceae</i> Lindl.	<i>Medicago</i> L.	<i>Medicago sativa</i> L.	Perennial	Mesophyte
33.	<i>Fabaceae</i> Lindl.	<i>Chrysaspis</i> Desv.	<i>Chrysaspis campestris</i> (Schreb.) Desv.	Perennial	Mesophyte
34.	<i>Fabaceae</i> Lindl.	<i>Lathyrus</i> L.	<i>Lathyrus sphaericus</i> Retz.	Perennial	Mesophyte
35.	<i>Papaveraceae</i> Juss.	<i>Papaver</i> L.	<i>Papaver rhoeas</i> L.	Annual	Xeromesophyte
36.	<i>Polygonaceae</i> Juss.	<i>Rumex</i> L.	<i>Rumex acetosella</i> L.	Perennial	Mesoxerophyte
37.	<i>Scrophulariaceae</i> Juss.	<i>Veronica</i> L.	<i>Veronica arvensis</i> L.	Annual	Xeromesophyte
38.	<i>Scrophulariaceae</i> Juss.	<i>Euphrasia</i> L.	<i>Euphrasia caucasica</i> Juz.	Perennial	Mesophyte
39.	<i>Linaceae</i> DC. ex Perleb	<i>Linum</i> L.	<i>Linum tenuifolium</i> L.	Perennial	Xerophyte



Figure 1. *Alyssum Heynh turkestanicum* Regel & Schmalh.



Figure 2. *Arabidopsis Thaliana* (L.) Heynh



Figure 3. *Conringia orientalis* (L.) Dumort.



Figure 4. *Lepidium vesicarium* L.



Figure 5. *Neslia paniculata* (L.) Desv.



Figure 6. *Sinapis arvensis* L.

The coordinates of the area with the phytocoenosis dominated by species of the *Brassicaceae* Burnett family were precisely determined using GPS: 39°4'56.172" N, 45°33'47.42388" E, 956 m a.s.l. 39°4'56.17128" N, 45°33'47.42352" E, 956 m a.s.l.

### Conclusion

In the phytocoenosis dominated by species of the *Brassicaceae* Burnett. family, 20 species are perennial (51.28%), 11 species are annual (28.20%), one species is biennial (2.56%), one species is either annual or perennial (2.56%), 3 species are trees (7.69%), and 3 species are shrubs (7.69%). Among these plants, 16 species belong to the mesophyte ecological group (41.02%), 11 species to xerophytes (28.20%), 7 species to xeromesophytes (17.94%), and 5 species to mesoxerophytes (12.82%). According to life form, perennials predominate, while according to ecological groups, mesophyte plants are dominant. Among the families present in the phytocoenosis, *Asteraceae* Bercht. & J.Presl is the most represented, accounting for 12 species (30.76%).

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