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THE MOSS FLORA OF KORCHAY STATE NATURE RESERVE

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ФЛОРА МХОВ КОРЧАЙСКОГО ЗАПОВЕДНИКА

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Abstract. The article discusses the floristic, ecological and cenotic features and the distribution of mosses in the territory of the Korchai State Nature Reserve. Among the mosses of the reserve, there are also species with a limited range. Those species are typical for silicate rocks and stony rocks. Another characteristic feature of the relief of the reserve is the presence of traces of ancient glaciation. Another characteristic feature of the relief is the absence of watersheds similar to a smoothed plateau. As a result of the research, it was found that the flora of the research area contains elements and relics from the last stages of the ancient Cretaceous period (3rd period). Relict species are pages of geologic history that reveal patterns of flora distribution.

Аннотация. В статье обсуждаются флористические, эколого-ценотические особенности и распространение мхов на территории Корчайского заповедника. Среди мхов заповедника также есть виды с ограниченным ареалом. Эти виды характерны для силикатных пород и каменистых пород. Еще одной характерной особенностью рельефа заповедника является наличие следов древнего оледенения. Другой характерной чертой рельефа является отсутствие водоразделов, подобных сглаженному плоскогорью. В результате исследований установлено, что флора района исследований содержит элементы и реликты последних этапов древнего мелового периода (3-й период). Реликтовые виды — это страницы геологической истории, раскрывающие закономерности распространения флоры.

Keywords: Bryophyta, species, flora, genus, nature reserves.

Ключевые слова: мхи, виды, флора, род, природоохранные территории.

By the order of the President of the Republic of Azerbaijan dated April 1, 2008, the Korchay State Nature Reserve was established in the administrative territory of Goranboy district on an area of 4833.6 hectares. The main purpose of the creation of the reserve is to develop the scientific basis for the preservation, reproduction and efficient use of the natural landscape of Bozdag, rare and endangered species of plants and animals. The basis of Korchay is the semi-desert, and in the plain areas, wormwood-ephemeral, wormwood-sorrel, wormwood-salsola, caragana cenoses of desert vegetation are formed. In the Korchay and Kura River valleys of the reserve, sparse tugai forests, bushes and semi-shrubs are spread. The lack of information about the composition of the moss flora of any area cannot give a complete picture of the composition of the existing ecosystem. Taking into account the role of mosses in the formation of the vegetation of the valley, the mosses of the Korchay State Nature Reserve were studied. The study of the moss flora of the reserve can provide valuable material about the development history of the flora of the region, as well as the evolution and systematics of mosses.

Т. 8. №11. 2022
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As a result of the research, it is known that the moss flora is closely related to various centers of reproduction, especially nemoral, boreal and Mediterranean elements. The cenotic role of mosses depends on the level of occurrence.

The composition, distribution and formation of the moss flora of the Korchay State Nature Reserve is related to the tectonic processes of different relief types, the nature of the habitat, the density of vegetation and the degree of humidity. The fact that the reserve area has a complex relief has led to the diversity of the moss flora.

In some areas of the reserve, epigeic mosses are rarely encountered, the density of vegetation that prevents the development of mosses, and the lack of epilithic mosses is due to the lack of silicate and limestone rocks. In well-vegetated desert and semi-desert associations, epigeic mosses cannot develop.

Depending on the inclination of the slope, the height of the sea level, the character of the relief, the composition of the soil, and the level of humidity, epigeic mosses form various sinuses on the soil surface. Depending on these factors, it undergoes a number of anatomical and morphological changes.

Pohlia annotina Lindberg, 1879, *Pohlia crudoides* Brotherus, 1903, *Andreaea rupestris* Hedwig, 1801 species in soils with high salinity in Solsoletum association, and *Dicranella cerviculata* W. P. Schimper, 1856, *Cynodontium strumiferum* Lindberg, 1864 in Andropogonetum association in soils with low salinity develop. *Barbula acuta* var. *icmadophila* (Schimp. ex Müll. Hal.) H. A. Crum and *B. convoluta* Hedwig, 1801 species are found in the soil of flat steppes. The mold-shaped pods of *Cladonia pyxidata* (L.) Hoffm., which grows on mosses on humid slopes, are replaced by prickly protrusions when moving to dry southern slopes. *Physconia muscigena* (Ach.) Poelt, which grows on moss cover, forms a circular cover of 3–5 cm in open places, while in the shade it forms 1.5–2.5 cm.

The study of the bioecological characteristics of epigean mosses shows that it is possible to use them as an indicator of the soil type. In the Korchay State Nature Reserve, *Cirriphyllum piliferum* Grout, 1898 grows on rotten and limestone soils, *Grimmia anodon* Bruch & W. P. Schimper, 1845, *G. pulvinata* Smith, 1807 and *Serpoleskea confervoides* (Brid.) Loeske light-grained chestnut of saline soils can be used as an indicator of soils.

As a result of the processing of field research materials and literature data, 69 species of moss belonging to 12 seasons and 30 genera were determined for the Korchay State Nature Reserve. Studying the species composition is the first stage of research. Giving a correct analysis of the formation, development and distribution of flora requires the explanation of issues related to ecology. The influence of abiotic, biotic and anthropogenic factors in the distribution of mosses is great.

Systematic structure and Latin names of mosses E. N. Andreeva (2000) and M. S. Ignatov (2006) systems were modified taking into account [1–3].

Arid origin species of the genera *Tortula*, *Tortella*, *Encalypta* are common in steppe areas. Different types of flora have ecologically different ecological ranges. Epigeous mosses in Tugai forests, and in the Bozdag range, epiphytes and epixillae of Bryaceae, Dicranaceae and Polytrichaceae families prevail.

Among the mosses of the reserve, there are also species with a limited range. Those species are typical for silicate rocks and stony rocks. Another characteristic feature of the relief of the reserve is the presence of traces of ancient glaciation. Another characteristic feature of the relief is the absence of watersheds similar to a smoothed plateau (Table).

Т. 8. №11. 2022
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Table

SYSTEMATIC COMPOSITION OF MOSSES OF THE BOZDAG RANGE

Families	*Genera*	*Species*
Pottiaceae	*Pottia*	2
	Barbula	2
	Trichostomopsis	1
	Tortula	3
Grimmiaceae	*Grimmia*	2
	Schistidium	1
Leucodontaceae	*Leucodon*	2
Neckeraceae	*Neckera*	2
Leskeaceae	*Leskeella*	1
	Leskea	1
Amblystegiaceae	*Amblystegium*	1
	Hygroamblystegium	1
	Leptodictyum	1
Brachytheciaceae	*Brachythecium*	1
	Camptothecium	1
Hypnaceae	*Hypnum*	1
Dicranaceae	*Dicranum*	1
	Orthodicranum	1
Hylocomiaceae	*Hylocomium*	1
Polytrichaceae	*Polytrichum*	3
Miniaceae	*Pohlia*	1
12	21	30

As a result of the research, it was found that the flora of the research area contains elements and relics from the last stages of the ancient Cretaceous period (3rd period). Relict species are pages of geologic history that reveal patterns of flora distribution.

These are widespread epiphytes that have acquired xeromorphic features in the steppes: *Amblystegium subtile* (Hedw.) Schimp., *Amblystegiella sprucei* (Bruch ex Spruce) Loeske, *A. confervoides* (Brid.) Loeske, *Calliergon cordifolium* Kindberg, 1894, *Homalothecium philippeanum* W. P. Schimper, 1851, *Camptothecium lutescens* (Hedw.) Schimp., *Brachythecium albicans* W. P. Schimper, 1853, *B. salebrosum* W. P. Schimper, 1853, *B. populeum* (Hedw.) Br. Eur., *B. cavernosum* Kindb., *B. mildeanum* W. P. Schimper, 1862, *Cirriphyllum piliferum* Grout, 1898, *Eurhynchium speciosum* Juratzka, 1863, *E. zetterstedtii* Størmer, *Rhynchostegium murale* (Hedw.) Br. Eur., *Entodon orthocarpus* (Brid.) Lindb., *Platygyrium repens* W. P. Schimper, 1851, *Hypnum imponens* Hedwig, 1801 etc. Relics are mostly settled in the Bozdag massif of Korchay. Here, the climatic conditions vary along the vertical zone. In the lower zones, the climate is mild-hot and humid, in the Bozdag ridge, the summer is mild-hot, and the winter is dry and cold. Tundra climate is typical for subnival and nival zones. *Pohlia annotina* Lindberg, 1879, *P. crudoides* Brotherus, 1903, *Andreaea rupestris* Hedwig, 1801, *Polytrichastrum alpinum* G. L. Smith, 1971, *Polytrichum strictum* Menzies ex Bridel, 1801, *Dicranella cerviculata* W. P. Schimper, 1856, *Cynodontium strumiferum* Lindberg, 1864, *Tortula subulata* Hedwig, 1801, *Grimmia anodon* Bruch & W. P. Schimper, 1845, *G. pulvinata* Smith, 1807, *Trichostomum crispulum* Bruch, 1829, *Barbula acuta* var. *icmadophila* (Schimp. ex Müll. Hal.) H. A. Crum, *B. convoluta* Hedwig, 1801 species are settled.

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