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BIODIVERSITY OF RAVINE FLORA OF THE NORTHEASTERN PART OF THE LESSER CAUCASUS

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БИОРАЗНООБРАЗИЕ ОВРАЖНОЙ ФЛОРЫ СЕВЕРО-ВОСТОЧНОЙ ЧАСТИ МАЛОГО КАВКАЗА

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Abstract. As a result of the study of the areas, the geographical features of the ravine flora were studied. The flora is grouped by geographical elements according to the existing scheme of geographical elements. Geographical analysis shows that pontic and nemoral geoelements are dominated by Eurasian, European, and ancient Mediterranean areas. Nemoral and pontic geoelements cover all areal types. Cosmopolitans dominate. It should be pointed out that as a result of human economic activity, the species composition in the ravines has decreased sharply. Ravines occupy an important place in the formation of the vegetation of the north-east of the Lesser Caucasus and play the role of soil protection and water protection. Systematic, biomorphological, ecological cenotic, geographical analysis shows that the ravine flora is similar to the zonal flora of the meadow steppe system, but at the same time has its own characteristics. It is heterogeneous in species composition. One of the peculiarities of the flora is the predominance of weeds, forest vegetation and migrants.

Аннотация. Изучены географические особенности овражной флоры. Флора сгруппирована по географическим элементам согласно существующей схеме географических элементов. Географический анализ показывает, что среди понтийских и неморальных геоэлементов преобладают евразийские, европейские и древнесредиземноморские ареалы. Неморальные и понтийские геоэлементы охватывают все типы ареалов. Доминируют космополиты. Следует отметить, что в результате хозяйственной деятельности человека видовой состав оврагов резко сократился. Овраги занимают важное место в формировании растительного покрова северо-востока Малого Кавказа, выполняют почвозащитную и водоохранную роль. Систематический, биоморфологический, эколого-ценотический, географический анализ показывает, что овражная флора сходна с зональной флорой лугово-степной системы, но в то же время имеет свои особенности. Неоднороден по видовому составу. Одной из особенностей флоры является преобладание сорняков, лесной растительности и мигрантов.

Keywords: flora, vegetation, family, genus, species.

Ключевые слова: флора, растительность, семейство, род, вид.

Ravines are formed as a result of the destructive activity of temporary watercourses in arid climates, on inclined areas of mountain slopes. Ravine refers to a steep-sloped hole scoured by the

activity of temporary or small stream waters in relatively high-plain areas, especially in soft sediment areas [7].

Ravines that have stopped widening, whose slopes are flat and whose bottoms have been smoothed are called dry ravines or gorge. Over time, the slopes of the ravine become sloping, the bottom is filled and covered with plants and turns into a gorge. Gorge is the final development stage of the ravine.

Ravines mainly cause great damage to agriculture, destroy agricultural land and make it unusable. In order to fight against ravines, trees and bushes are planted on its slopes and adjacent areas.

Methods

The Lesser Caucasus, which has a complex geomorphological structure, is distinguished by the presence of mountainous, mountainous and foothill parts, especially in its northeast. As in other mountainous zones of the republic, there are many ravines. In the study area, there are ancient relic type ravines, which are the refugiums of many rare plants. Based on the classification scheme of A. A. Grossheim S. Kh. Shkhagapsoev in order to determine the types of ravines, the ravines of the research area are divided into 3 types: ravines of the 3rd period; Pleistocene ravines of the ice age; post-glacial xerothermic ravines and modern anthropogenic ravines [5].

As a result of expeditions to study wild ravines 25 geobotanical descriptions have been done in the area of 850 m². Species abundance, the species name are due. Developing image is used of special programs (TURBOVEG, TWINSPAN, MEGATAB) [3-5, 8].

The relevance of the topic: Ravine vegetation remains as "White glades" not only on the botanical map of the Lesser Caucasus, but also on the botanical map of Azerbaijan as a whole. There is information in the works of many researchers about the vegetation of the north-east of the Lesser Caucasus. Vegetation is mainly distributed according to the law of vertical zonation, as well as intrazonal, extrazonal and azonal types of vegetation. Based on literature data and personal research, it was determined that the following plant groups are distributed in this area [6, 7]:

1. Xerophytic bushes
2. Mountain forests
3. Mountain meadows
4. Open phytocenoses of rocks and outcrops

It should be noted that the vegetation of the ravine is wetland, swamp, grass, etc. It is interzonal like vegetation types. In addition to typical zonal plants, interzonal types are also found within certain zones. Alpine meadows occupy a special place in the vegetation of the study area. In the formation of alpine phytocenoses, *Campanula*, *Ranunculus*, *Carex*, *Festuca*, *Primula*, *Plantago*, *Veronica*, *Viola*, *Alchemilla*, etc. genera prevail. Jils are typical for alpine meadows. Alpine meadows have formed their own background.

In the flora of the highlands, Poaceae, Caryophyllaceae, Asteraceae, Campanulaceae, Brassicaceae, Fabaceae families are dominant, Ranunculaceae, Papaveraceae, Violaceae, Primulaceae, Gentianaceae, Boraginaceae, etc. families are subdominant families.

From a brief overview, it is known that the study area has unique natural-geographical conditions and phytocenological and floristic characteristics. Desert, semi-desert, steppe, tugay-type natural complexes, characterized by floristic richness, many rare landscapes, plant formations, dominant and edificators that formed them, including rare, relict and endemic species, were almost destroyed as a result of human economic activity. The ecological balance in the region is in danger of being completely disturbed [9].

The purpose of the conducted research is to provide a systematic, biomorphological, ecological cenotic and geographical analysis of the flora of the ravines of the North-East of the Lesser Caucasus (Ganjachay Valley). Field research were carried out by generally accepted geobotanical methods (profile section, routes, sample plots, harvested samples). As a result of the processing of the research materials, 177 genera and 345 species included in 47 families were identified for the North-East ravines of the Lesser Caucasus. Asteraceae, Lamiaceae, Poaceae, Rosaceae prevail. The species included in that family form the basis of the systematic structure of the flora. This also shows the close relationship between the ravines of the study area and the arid centers of the systematics in the flora of the ravines. In the taxonomic structure of the ravine flora, 212 species belong to 9 leading families. This is 61% of the flora. Represented by more than 40 species Fabaceae (40), Asteraceae (34), Caryophyllaceae (30), Poaceae (26), Brassicaceae (26), Rosaceae (18), Lamiaceae (18), Papaveraceae (11), Ranunculaceae (8) families make up 39% of the flora. The remaining 39 families include a total of 135 species (38%). Cyperaceae (5), Dipsacaceae (5), Hyacinthaceae (5), Apiaceae (6), Alliaceae (7), Liliaceae (8), Boraginaceae (8) families are represented by 5-8 species and play a decisive role in the formation of ravine flora [2, 6].

The local flora also plays an important role in the systematic structure of the flora of ravines. It should be noted that the landscape plays a key role in the systematic structure of the flora of ravines. The increase in the presence of the Ranunculaceae family in ravines is related to the high moisture regime of ravines.



Figure. Study area general view of ravines around Shamkirchay reservoir

The ravine flora of the study areas was determined by life forms. Biomorphological analysis shows that perennial grasses are the main place. Among them, plants with rhizomes (26.8%) and shaft rooted (20.1%) prevail. The increase of perennial rhizomes, shaft-rooted, and root-loving in the

vegetation ensures the protection of the soil cover. The analysis of life forms shows that the processes of synanthropization and therophytization (share of annuals) are high in conditions of increased anthropogenic load. This situation is especially observed during the period when the primary vegetation cover of ravines begins.

Ecological cenotic analysis of the flora of the ravines of the study areas is not 1 gender. 120 types (20.5%) of steppe vegetation are the main place. This is because the ravines are mostly in the steppe areas. These species are mainly observed at the bottom of ravines, in the lower part of ravine slopes. It occupies an important place in grass plants (46 species or 8.6%). The species included in this group are observed at the bottom of ravines and on the northern and eastern slopes of ravines. Forest species predominate over grassland species. This shows that the ravine system is interzonal in nature. The focus here is on weeds and ruderal plants. This is the grazing of the areas located in the ravines by animals. In ravines, marsh group (0.4%), meadow marsh (1.1%), and aquatic coastal plants (0.1%) dominate. The species of this cenotic group are found in the bottom parts of deep ravines. Desert-steppe elements (1.5%) are also found in the ravines of the Korchay State Nature Reserve.

Results

As a result of the study of the areas, the geographical features of the ravine flora were studied. The flora is grouped by geographical elements according to the existing scheme of geographical elements. Geographical analysis shows that pontic and nemoral geoelements are dominated by Eurasian, European, and ancient Mediterranean areas. Nemoral and pontic geoelements cover all areal types. Cosmopolitans dominate. It should be pointed out that as a result of human economic activity, the species composition in the ravines has decreased sharply.

Ravines occupy an important place in the formation of the vegetation of the north-east of the Lesser Caucasus and play the role of soil protection and water protection. Systematic, biomorphological, ecological cenotic, geographical analysis shows that the ravine flora is similar to the zonal flora of the meadow steppe system, but at the same time has its own characteristics. It is heterogeneous in species composition. One of the peculiarities of the flora is the predominance of weeds, forest vegetation and migrants.

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