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## Research and use of flora and fauna of Karabakh

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**Abstract:** The main goal of this thesis is to get to know the clay soil of Karabakh better, to give brief information about its rich flora and fauna. It is very important to research the nature and resources of the Karabakh land to write works with this or another name. Because it is very important to know what kind of wealth lies in the territory that has been enslaved by the enemy for a long time. At the same time, it is important to pass them on to future generations in writing in Azerbaijani. Because when the enemy claims rights over these lands, it is necessary to show such sources. We should learn and teach about the nature of Karabakh.

**Key words:** Flora of Karabakh, Fauna of Karabakh, Research and protection of flora and fauna of Karabakh.

### 1. INTRODUCTION

Flora and fauna of Karabakh Karabakh and surroundings covers biodiversity in its territories. In general, the Karabakh zone has always been rich in its diversity of flora and fauna. It is absolutely necessary to collect detailed information about the flora and fauna of Karabakh and to recognize and promote these areas. Any Azerbaijani should know this information, emphasize that Karabakh is ours and protect its nature – flora and fauna [1-6].

### 2. EXPERIMENTAL DETAIL

**Flora of Karabakh:** ground cover-chestnut, light chestnut, mountain-dark chestnut, brown mountain-forest, brown mountain forest, blackish mountain-meadow, etc., the lands are widespread. More than 2000 species of plants are found in the richly vegetated area. Wormwood, wormwood-saline semi-desert in the plains, stony, sibiya, wormwood-combush steppe and semi-steppe plants in the foothills, thickets, broad-leaved forests (beech, oak, etc.) occupy a large area on the mountain slopes. There are also subalpine and alpine meadows at an altitude of 200-2300 m above sea level. More than 460 species of wild trees and shrubs grow in these areas, which are favorable in terms of landscape diversity, 70 of them are considered endemic species,

which do not grow naturally anywhere in the world. In addition, among the species of wild trees and shrubs that have been included in the “Red Book” of the Republic of Azerbaijan in the last 30 years. Forests and red oak trees, which are considered relict plants and spread in the territory of Lachin State Nature Reserve, were massively cut down and used for furniture production and sold abroad. In addition to trees and shrubs, there are violets, tulips, roses, lilies, carnations, blackberries, etc. In the forests.

There are 4 species of mammals, 8 species of birds, 1 species of fish, 3 species of amphibians and reptiles, 8 species of insects, and 27 species of plants included in the “Red Book” of the Republic of Azerbaijan in these areas with rich fauna diversity. Some of them are included in the International Red List. Karabakh territories form one of the important Transcaucasia migration routes of birds from Europe to Africa, Asia and vice versa. In connection with the process that took place, in addition to the destruction of the upper fertile layer of the soil, the burning of the animals living here leads to the death of bird eggs and chicks and the permanent loss of the relationship with the habitat of these species, and a sharp decrease in their number. 70 percent of Karabakh are areas where the species diversity of reptiles is very widespread. Amphibians and reptiles, occupying an important

position in the food chain of zoonoses, play an important role in the stability of fauna biodiversity of the ecosystem. Levantine viper, a poisonous snake, is also widespread in Karabakh territories. Here, the richness of the flora has led to the development of animal husbandry. During the winter period (for six months), hundreds of thousands of animals grazed in the lowlands of the Lesser Caucasus, and in the summer, the animals were transferred to summer pastures for 3-4 months. Such a system made it possible to feed animals in all seasons (in winter – desert, semi-desert, steppe, in summer – meadow). As you can see, over time, the flora of Karabakh and the biodiversity of its vegetation differed with its colorful vertical zonation, which has no analogues in the world. Karabakh, also included in the “Red Book” of the Republic of Azerbaijan, medium and large-sized animals that are in danger of extinction, such as safsar, river otter, brown bear, striped hyena, reed cat, wild cat, lynx, Caucasian leopard, noble deer, roe deer, Bezoar goat there are also rare mammals.

Karabakh horses are considered the oldest horse breed in Asia and the Caucasus. Researchers believe that Karabakh horses are descendants of Manna, Midian, Atropatena, and Albanian horses. The height of the withers of Karabakh horses is 148.5 cm, the girth is 165.8 cm, and the girth of the withers is 18.3 cm. They are mostly golden and brown horses. Since 1946, breeding work with the breed has been carried out at the Agdam horse breeding plant.

Karabakh horses have been used by Roman, Sasanian, Arab, Seljuk, Mongolian, Iranian, etc. For centuries. Although it underwent certain changes as a result of interaction with horses, it was able to keep its original roots. In the 18th-19th centuries, the breed of Karabakh horses was significantly improved. Karabakh horses have had a great impact on horse riding in Turkey, Iran, Georgia, the North Caucasus, Russia, Kazakhstan, as well as in Western Europe.

For nearly thirty years, as a result of the occupying policy of Armenia, the soil, water, state natural monuments, biodiversity – flora and fauna of Nagorno-Karabakh and its surrounding 7 regions have been seriously damaged. The Karabakh conflict has caused depletion and pollution of many ecologically important lakes and rivers in the territories of Azerbaijan. After complete demining, serious investigations should be conducted in these areas, flora and fauna should be studied, and urgent measures should be taken after proper assessment. The natural resources of Karabakh are the property of our people and should be under the control of our state. The people of Azerbaijan should take

advantage of these resources – underground and surface resources.

The wild and destructive attitude of Armenia to these areas and its fauna diversity has led to the destruction of animal species living in the mentioned areas. As a result of such a brutal attitude, the natural habitats of amphibians and reptiles are destroyed, biotopes are destroyed, as a result, populations are weakened and destroyed, and the habitats of amphibians and reptiles, which are more sensitive to the influence of disturbing factors such as environmental pollution, the construction of trenches and drillings, the movement of equipment during military exercises and operations, caused the change of areas. In addition, the hated enemy who plundered the natural resources of useful, economically profitable amphibian and reptile species, because the meat of the lake frog was valued as a rare delicious food product in Europe, engaged in the business of this species, exporting and looting our natural wealth abroad. In addition, the Levantine viper, which is a poisonous snake species, is also widespread in the occupied territories of Karabakh, and this species of snake is rarely found in Armenia’s own territory. But this is also an undeniable fact that Armenia was trying to sell snake venom, which is considered more valuable than gold, to the world market. There is no doubt that Armenia obtained this valuable medical raw material at the expense of viper snakes looted from the occupied Karabakh territories of Azerbaijan. In particular, the regions of Aghdara, Askaran, and Khojavand were very rich with oak, beech, birch and birch forests. Eastern oak (*Quercus majranthera*), Trautvetter birch (*Acer trautvetteri*), 4 species of ash tree (*Betula* sp. Div), Oriental beech (*Fagus orientalis*) were widely found in high mountainous areas. Along with the vegetation types mentioned in this type of forests, wetland vegetation was also encountered in some places. Among the massifs of pastures, forests and bushes, the local population mainly cultivated grain, melons and technical crops. The flora of Karabakh is a land with great potential for the development of new medicines. In Karabakh, which is one of the regions with a wide spread of folk medicine traditions and an ancient history, folk healers have been active for centuries and have been deeply involved in the treatment of people using various natural methods, primarily medicinal plants. The wide spread of folk medicine in Karabakh comes from the richness of the flora here. About the potential possibilities of the medicinal flora of Karabakh, the head of the laboratory of phytosociology of ecosystems of the Institute of Botany of ANAS, b.e.d. Deputy Mehdiyeva issued a statement. The expert said that the flora of Karabakh has a great potential for the supply of herbal

medicinal raw materials and the development of new medicines.

Topkhana forest with an ancient history is one of the rare treasures of Shusha. Before the occupation, the forest consisted of oak, beech, sycamore, elm, etc. such as plants, bears, wolves, foxes, rabbits, roe deer, partridges, pigeons, doves, etc. It was rich in animals. According to him, 606 types of medicinal plants belonging to 110 families and 397 genera are distributed in Karabakh (of which 11 types belong to 4 families, 10 genera are sibium), and 66 types of these plants are widely used as medicinals in official medicine: "19 families of medicinal plants distributed in Karabakh and 35 species of 28 genera are endemic to the Caucasus, 32 species are rare and in danger of disappearing, and are included in the "Red Book" of Azerbaijan.

N. Mehdiyeva said that the biological activity and healing properties of various medicinal plants spread in Karabakh are quite high, and she emphasized that 163 types of these plants have diuretic properties, 157 have antibacterial properties, 138 have anti-inflammatory properties, 81 have astringent properties, and 19 have antiviral properties. He noted that more species of these medicinal plants are cardiovascular (81 species), gastrointestinal (155 species), kidney (55 species), liver (80 species), skin (149 species), diabetes (35 species) and is used in the treatment of many other diseases.

"One of the most important tasks facing botanists-scientists today is to monitor the vegetation of Karabakh and determine ways to restore it," said N. Mehdiyeva, noting the importance of starting these works in the liberated areas without delay. Now, the economy in Karabakh is expected to develop in six main directions: agrarian business, food industry, mining industry, green energy, transport-logistics and tourism. 200,000 hectares of agricultural land and more grazing land, as well as tens of thousands of hectares of unused land along the former front line, form the resource base of agribusiness.

It is planned to develop the mining industry in Karabakh at the expense of 167 mineral resources. Especially, due to the Söyüdlü deposit, Kalbajar becomes the center of the mining industry in the region. The impact of the Karabakh region on the mining industry in our country can be 5.3%, and 4.3% on the processing industry.

Jabrayil district, being a transport and logistics center, is located on the lines of communication with both Turkey and Iran, as well as other regions of Karabakh. The impact of the Karabakh region on transport services in Azerbaijan is estimated at 4.9%. Shusha will become the main driver of tourism not only in Karabakh, but also in Azerbaijan as a whole, and in the coming years as the cultural center of the

Islamic and Turkic worlds. The largest city of the Karabakh region, Aghdam, with a population of 70,000, can function as a light industrial and service center of the region.

The potential of 0.5 gigawatts of wind, 0.7 gigawatts of water and 4 gigawatts of solar energy in the Karabakh region lays the groundwork for turning the region into a green energy zone. Khudafarin, Gyz Galasy, Sugovushan stations, as well as small hydropower stations in Kalbajar and Lachin are able to meet the primary energy needs of the Karabakh region. BP's intention to invest in green energy in Karabakh is an additional incentive to attract investment not only in the field of alternative energy, but also in the Karabakh region as a whole.

At the present time, the concept of the restoration and development of the regions freed from occupation by our state has been developed, and as an important direction of its implementation, taking into account the economic potential of those regions, including forest, water and land resources, agriculture, industry, as well as tourism and the revival and development of others. We know that the territories freed from occupation have rich underground and surface resources: ore, non-ferrous metals, gold, mercury, chromite, lime, marble, agate, mineral waters, etc. It has some mineral resources and a large resort recreation potential. In these areas, many building materials necessary for the construction sector: sawstone, brick, gravel, cement, limestone, necessary raw materials for production, construction sand, etc. There is also Before the occupation, the industries operating in these areas had an important role in the republic's economy. Here mainly food, light, construction materials, etc. Some industries have developed strongly. Before the occupation, among the industrial sectors of these areas, the most developed ones were used by the local population with food, etc. It was important in providing things. Istisu and Turshu mineral water bottling enterprises, marble and sawstone factories of Nagorno-Karabakh and Aghdam, wineries, textile and shoe factories, Karabakh Silk Combine, etc. Are located in those areas. Enterprises performed important activities. As for agriculture, grain growing, fodder production, tobacco growing, grape growing, cotton growing, potato growing, horticulture and melon growing, meat and dairy breeding, especially sheep breeding were more prevalent in these areas. In these areas, 311 agricultural enterprises, including the famous Karabakh breed racehorses, Aghdam state farm, 319 collective farms and 92 state farms were operating in these areas.

As a whole, in the pre-occupation period, approximately 35-40% of Azerbaijan's agricultural products were produced in these regions, including

14% of meat, 17% of cocoons, 14% of grain, 31% of grapes, 17% of milk, more than 19% of wool was produced. What is said shows us that there is a great potential for the production of both agricultural and livestock products in the liberated regions, and the existing natural climate conditions create a favorable opportunity for the revival and development of these areas. The realization of this economic potential and opportunities will create very favorable conditions for meeting the demand of the population of the region for those products, as well as for the development of the processing areas of the agrarian division, and most importantly, for the improvement of food security in our country. Self-sufficiency will improve, especially with livestock products. Thus, at present, the self-sufficiency level of our country with meat and meat products is 82.5%, and with milk and milk products is 86.2%. According to forecasts, we will be able to provide ourselves with these products, as well as cereals, at a higher level even after the economic activity in the liberated areas is restored. Attracting the industrial potential of our freed territories to the economic cycle will create an opportunity for the development of mining, metallurgy, construction materials, and various processing industries. According to preliminary estimates, in the coming years, the total production volume in the main areas of Upper Karabakh and Kalbajar-Lachin economic regions may increase by more than 2 billion manats. Thus, bringing the full potential of our lands freed from occupation into the economic cycle will increase the value of the country's GDP, clarify the forecasts related to the development of the non-oil sector, increase the place and share of this region in the country's territory and labor distribution, increase the production of goods and services in the region. Will create great opportunities to ensure competitiveness.

### **3.CONCLUSION**

From this we can conclude that the nature of Karabakh is desirable. It is so magnificent that it can amaze a person. These places are of great interest to people with both plant diversity and animal world. However, after 30 years of occupation, the rich flora and fauna of Karabakh still needs to be explored and explored and re-evaluated. A region like Karabakh, which is remarkable for its flora and fauna, always needs the attention and care of the people and the state. The flora system of Karabakh should be investigated first, and finally treated. It is obvious how the soil is polluted and how the fertile lands are drained. The lands are not only dehydrated, but also polluted with harmful and toxic substances. Both during the war – both during the first Karabakh war

and the second Karabakh war, as well as during the occupation between the wars, the lands of Karabakh were attacked by the enemy. Cleaning these lands is an undeniable fact that it will take a long time. Whether it is mine clearance, whether it is clearance from shrapnel and other weapon remnants, or clearance from chemical waste, it is a very long and dangerous process. This is dangerous both for the animals living in the area and for the lives of the people cleaning the area, and at the same time, the process of resettling people, that is, the local population, to the contaminated land is delayed and difficult. The land must be fertile and safe so that people can farm and raise livestock here, or at least live here without fear.

The statistical indicators of the animals that lived in Karabakh and are still living should be compared, and after making a proper assessment, great attention should be paid by the nature protection association. In the land of Karabakh, there are living creatures that live only here, and at the same time, there are also creatures that are endangered and listed in the Red Book, which should be investigated and their placement in protected areas should be the focus of attention.

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