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SPECIALLY PROTECTED NATURAL AREAS OF VOLOZHIN DISTRICT

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The preservation of landscapes varieties is becoming the theme for serious researches of the scientists all over the world and the problem is to be solved on the highest government level. The Republic of Belarus is implementing a programme on the extension of nature-conservative lands to ensure natural resources for present and future generations. The interested parties in the republic are fulfilling a systematic work on cataloging of the existing natural monuments and on identifying the new ones.

The scientific merit of the work is in the fact that the natural monuments are an integral part of a landscape that creates the uniqueness of it. The possibility to satisfy the conditions of preservation of the specially protected natural areas in Volozhin district are offered to meet the requirements of a touristic area and thus to attract tourists to the region and increase the commercial efficiency of it.

The aim of the presented work is to define the principles of the usage of specially protected natural areas as a natural resource of Volozhin district for the further economic development.

Material and methods. The systems approach is the main scientific method used for the presented work. Also here has been done the analysis of the catalogue developed in the Academy of Science of the Republic of Belarus and some general conclusions have been drawn.

Findings and their discussion. It is necessary to understand that specially protected natural areas are an important resource and an integral part of the environment. The nature protection activities help to preserve the landscapes in their primeval shapes and thus they maintain biodiversity. Some of the specially protected natural areas can help to survey the past of the studied area. Subsequently the findings will allow to forecast the further development of the region. Moreover folk epic of peoples inhabited this area, including various legends and superstitions, is attributed to some of the specially protected natural

areas and natural monuments. That is the reason for regarding the specially protected natural areas as touristic sights that in perspective will attract tourists in the region and can favour the economic growth.

According to the environmental regulations of the Republic of Belarus there are several categories of the specially protected natural areas. They are the following:

- Wildlife preserve is a specially protected natural area that has been established for protection and recovery (reproduction) of valuable natural complexes and objects.

- Wildlife area is a specially protected natural area that has been established to maintain the natural course of environmental processes, to preserve them in the natural state and to study the valuable natural complexes and objects.

- National park is a specially protected natural area that has been established for recovery (reproduction) of valuable natural complexes and objects, their rational (sustainable) usage in the course of nature-conservative, scientific, educational, touristic and recreational activities.

- Natural monument is a specially protected natural area that has been established for the preservation of valuable natural complexes and objects [1].

Besides the above-listed definitions Article 16 of the Regulations on Specially Protected Natural Areas prescribes the criteria for identifying specially protected natural areas along with the regulations on what category each area should be reckoned in [2].

There are thirty specially protected natural areas in Volozhin district, they include 18 natural monuments of Republican significance, 8 natural monuments of local significance, a wildlife preserve of Republican significance and 3 wildlife preserves of local significance.

The influence of early Pleistocene glaciations – the Sozh glaciation, the Dnieper glaciation and the Lakeside glaciation – is the main reason for formation of the relief of the region along with geological natural monuments. Also the specially protected landscape natural areas were formed under the impact of glaciations, but in this case it is possible to speak about man's impact on the environment. Man's impact was the reason for the preservation of Naliboky Pushcha due to the uselessness of the land for agriculture; the outwash in the area is characterized by low fertility. As the soil in the area remains the same, the touristic resource of a vast wild forest can become one of the most profitable and is worth developing further.

The rebirth of ancient legends related to the preserved natural monuments will boost the development of attractiveness and awareness. For example, conglomerate 'Saint Detritus Buzunovskiy', a geological natural monument of Republican significance, is attributed to several local legends. Perhaps here used to be a pagan shrine where our ancestors mounted idols. Traditionally folk epic pays special attention to springs. On the territory of Volozhin district there are

two springs: the Volozhin spring and the Rakov spring. Both springs are the natural monuments of local significance, both are situated within the boundaries of towns of Volozhin and Rakov and both are developed and included into churches' complexes. The water is drinkable.

Conclusions. Only three above-mentioned samples demonstrate that the resource of Volozhin district is diverse and even ready to use as a tourists' attraction. Touristic potential should be being developed in the Republic of Belarus as our country can attract a sophisticated tourist by the diversity of the wildlife. Also it is obvious that the specially protected natural areas of Volozhin district can become sights of interest provided proper activities.

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MODELING THE INFLUENCE OF PHENOL ON INDICATORS OF NITROGEN METABOLISM IN PULMONARY FRESHWATER MOLLUSKS

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The development of water transport, the growth of industrial and household wastewater, lead to the pollution of water bodies. All this represents a great threat for hydrobionts living in water bodies with a high level of anthropogenic load [1].

The state of the environment and its changes can be judged by the reaction of living organisms and a change in their metabolism. To assess the potential hazard of toxicants for the exchange of substances of hydrobionts, a bioindication is used. Hydrobionts as indicators of living conditions are convenient for studying the state of aquatic ecosystems and their subsequent changes during anthropogenic exposure.

Phenols are one of the most widespread pollutants entering the waters of the enterprise. The discharge of phenolic compounds into water sharply worsens their general sanitary condition and influences living organisms not only by their toxicity, but also by a significant change in the amount of nutrients, O₂ and CO₂ [2].