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**NATURAL BIOTOPES OF LATORICA RIVER BASIN: CLASSIFICATION,
COMPARATIVE ANALYSIS AND ASSESSMENT OF CHANGE**

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SUMMARY

The aim of the dissertation is creation of classification of biotopes of Latorica river basin, their comparison and assessment of their changes under anthropogenic and natural factors. According to the aim of the dissertation, **the objectives of the research** are the following:

- to conduct a critical analysis of scientific approaches regarding assessment of ecosystem state and change;
- to develop classification scheme of biotopes of Latorica river basin and submit their characteristics (in accordance with the other classifications, diagnostic species, distribution, conservation value and abiotic environmental conditions);
- to conduct a comparative analysis of the environmental conditions of different types of biotopes using the method of synphytoindication;
- to establish main types of communities that are differentiated by different types of human impacts and represent an appropriate stage of succession, to analyze their floristic and structural changes;
- to assess the diversity of biotopes types, to calculate their sustainability and risks of losses, the degree of representativeness in objects of nature reserve fund.

The research methods. Field (route, geobotanical relevés) and desk (classification, synphytoindication, ordination, correlation and cluster analysis, other statistical methods).

In the **Introduction**, the actuality of the topic is grounded, the object, subject, aim, objectives, methodology of the research are described, the novelty of the topic, its theoretical and practical results are grounded, information on its connection with the scholarly programs, approbation of its results, structure and the quantity of pages is presented.

The Chapter 1 “Theoretical Basis of Ecosystem Assessment” is dedicated to the historical aspects of ecological research in Latorica river basin, and main methods and approaches regarding assessment of ecosystem state and changes. **In Chapter 2 “The Conditions, Objects and Methods of Research”** ecological and geographical characteristics of Latorica river basin are presented, objects and methods are described. **The Chapter 3 “The Classification of Biotopes of Latorica River Basin”** is dedicated the classification, description and comparison of biotopes of Latorica river basin. The classification is elaborated in accordance with EUNIS scheme. The hierarchical system includes six main biotopes types, which are divided into units of 3-4 levels. The 57 types of biotopes were described. The biotopes distribution along altitude gradient and their amplitudes was established. **In Chapter 4 “The Assessment of Biotopes of Latorica River Basin”** the most powerful man-made factors affecting the biotopes structure in Latorica river basin are describes, in particular, cutting, fire, recreation, ruderalization, grazing, which are threats to the existence of natural ecosystems. The scheme of succession stages and types of habitat degradation was developed, their quantitative ecological indicators were calculated, their floristic and structural

changes were analyzed. The ecological niche of invasive species was estimated. **In Chapter 5 “Conservation of Biotopes of Latorica River Basin”** the assessment of stability and risks of loss of different types of ecosystems was conducted. It was established that 28 of the 57 biotopes types ($\approx 50\%$) are need protection, which indicate the high zoological value of the region. In the **Conclusions**, the outcomes of the research are presented. The regularities of biotopes distribution along altitude gradient and their amplitudes were established. It was found that within the Transcarpathian plains meadow steppe habitat type are completely absent, and thermophilic oak forests occur in the form of fragments, indicating a loss of natural common features of the region. Comparative analysis of indicators value of biotopes along altitude gradient shows that from alpine to lowland zones acidity, salt regime, carbonate content and nitrogen content in the soil increased, as well as indicators of thermal climate, while indicators of humidity reduced. The regularities of changes in biotic diversity and its components are established, which confirm the perturbations hypothesis of Connell and Huston, according to which the highest diversity is observed in ecosystems with middle-disturbance. It is shown that the indicator of community transformation in mountainous regions is the ratio of the number of species of the family *Asteraceae*, *Fabaceae* and *Poaceae* to the total number of species. It is found that the most vulnerable to invasions elements are floodplains and plain part of the Latorica river basin. The high zoological value of the region was revealed.

Keywords: biotope, classification, ecological indicator value, biodiversity, degradation, zoological assessment, conservation.