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LANDSCAPE-BASIN APPROACH TO THE STUDY OF FLORISTIC DIVERSITY (HETEROGENEOUS CATCHMENTS OF STEPPE AND FOREST-STEPPE ZONES OF ALTAI KRAI, RUSSIA, AS A CASE STUDY)

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The area of the study of floristic diversity must have natural landscape or basin boundaries, which are largely interdependent. Catchments, with the exception of some of the first order, are the regionally representative combinations of landscape units of topological level, distinguished by territorial contiguity and joint functioning. In zonally uniform catchments or their parts, a combination of landscape and basin differentiation factors allows to identify the partial geosystems in the rank of landscape and floristic microregions. The most important criterion for identification of elementary natural regions (microregions) is the representativeness for the region of the next higher hierarchical rank. The landscape-basin structure determines the differentiation of flora both at elementary regional and topological levels, therefore landscape microregions correspond to floral ones, and the hierarchy of landscape units (facies (microecotope) – urochishche (mesoecotope) – terrain (macroecotope) – landscape (megaecotope) corresponds to the hierarchy of partial floras. The selection of sites with maximum floristic diversity for field research is based on the landscape-basin approach. The comprehensive analysis of remote sensing data, topographic and thematic maps allows to estimate the occurrence of units (dominant, subdominant, secondary, rare, unique) and their preservation under the anthropogenic fragmentation of vegetation cover (flora-isolates). The comparative analysis of floristic diversity (differential species, taxonomic and typological structure, spatial organization) is carried out concurrently with the analysis of the author's landscape maps of basins to identify the cause-and-effect relations and to compare the regularities. The work is supported by the Russian Foundation for Basic Research [grant number 15-05-01760-a].