

RELATIONSHIP OF PHYTOCENOTIC DIVERSITY OF THE NORTHEASTERN TRANSBAIKAL OROBIOME WITH BIOCLIMATIC PARAMETERS

M. V. Bocharnikov

*M.V. Lomonosov Moscow State University
Leninskie gory, 1, Moscow, 119991, Russia
e-mail: maxim-msu-bg@mail.ru*

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The most important spatial patterns of vegetation diversity of the Northeastern Transbaikalian orobiome have been determined on the basis of climate using data of the BioClim global model. For the first time, a regional climate of the three-part structure of vegetation cover has been evaluated for typological units of vegetation on a high hierarchical level (the phytosociological classes of vegetation formations) and for altitudinal belts of vegetation on the basis of geographical and genetic classification of vegetation. The ombrothermic index of summer, continentality index, and average precipitation have been identified as the most significant parameters for spatial differentiation of the altitudinal-belt structure of vegetation. The ordination of basic typological data on vegetation using statistical methods (principal component analysis, discriminant analysis and cluster analysis) has been carried out. An integral matrix of spatial differentiation of vegetation has been created in bioclimatic coordinates (continentality, temperature supply). The altitudinal-belt structure of vegetation of orobiome has been confirmed by climate; regional differentiation in climatic optima for belts and sub-belts has been determined. Basic vegetation communities of the orobiome develop in conditions of continental climate (continentality index – from 36 to 50). Temperature parameters, first of all for the warmest period, determine the spatial differentiation of vegetation sub-belts. They characterize the change of sparse forests by Siberian dwarf pine communities in the sub-tundra belt, of larch and pine forests by dark coniferous forests in the montane taiga belt. Moisture parameters determine regional patterns in the typological diversity of vegetation belts. They are connected with the development of fir-spruce forests in low mountains of the Patom Highland (more moistened conditions with annual precipitation above 450 mm per year) and pine forests in intermountain depressions of the Stanovoy Highland (maximum values of annual temperature amplitude and annual precipitation below 400 mm per year).

Keywords: mountain ecosystems, altitudinal belt, climate, ordination, cluster analysis, Transbaikalia

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