

SPATIAL STRUCTURE OF THE DERIVED OAK-FORESTS IN THE SOUTHERN PRIMORSKY TERRITORY

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Abstract. *Background.* The high anthropogenic load on forest vegetation in the southern regions of the Far East leads to the widespread replacement of native coniferous-broadleaf forests by low-value *Quercus mongolica* forests. The spatial structure study of these communities allows exploring their transformation processes during the restorative succession and revealing new regional features of the forest-forming process. The research goal is to study the spatial structure of the oak forests derivatives in the Southern Primorsky Territory, taking into account ecotopic conditions and anthropogenic impact. *Materials and methods.* The studies were carried out at key sites in oak forests located in two adjacent watershed basins at the southern slopes of the western Sikhote-Alin Mountains. The forests in one basin were completely cut down and then during the restoration they were regularly affected by fires. At the second site (plots with natural vegetation in the arboretum of the Mountain-Taiga Station of the Far Eastern Branch of Russian Academy of Sciences), the forests underwent selective felling and there were no fires. At both sites, forestry geobotanical studies were conducted according to the generally accepted Russian methods for examining forest types. The selection of coenoelements was carried out on the basis of solid mapping and detailed description of all plant tiers, analysis of the adificator ecobiomorphes. *Results.* At studied slopes, the forest cover with similar typological composition and identical phytocoenoses structure was formed. In the conditions of regularly recurring fires, the main part on the surface of the southern slopes is occupied by dry oak-forests, where xerophytic sedges and Asian cow-wheat are prevalent (from the watershed to the lower part of the slope). In the arboretum, fresh oak-forests with nemoral herbs dominate. More diverse oak ecobiomorphs composition and simple phytocoenoses structure are peculiar to dry oak forests. *Conclusions.* The structure formation in dry oak forests is determined by ecotopic and anthropogenic factors, in fresh oak forests – by ecotopic and coenotic. The degree of phytocenoses impairment and the features of anthropogenic impact play a significant role in the indigenous forests restoration. The forest-forming process is more advanced in forests, which underwent selective cutting and were not affected by fires. The developed undergrowth with predominant Manchurian hazelnut, petaloid-filament meadow-rue and Japanese chloranthus parcels, which are typical for indigenous forests, and no xerophytic parcels testifies to it. The study of the spatial structure is necessary as a basis for regional forest monitoring and reintroduction of former coniferous forest-forming species.

Key words: derived forests, spatial structure, *Quercus mongolica*, ecobiomorphs, forest-forming process, the Primorsky Territory.