

**FORMATION OF THE SPATIAL PATTERN OF *PICEA AJANENSIS* (PINACEAE) IN KOREAN PINE-BROADLEAVED FOREST IN THE SOUTH OF THE RUSSIAN FAR EAST**

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SUMMARY

We studied structure and described *Picea ajanensis* (Lindl. et Gord.) Fisch. ex Carr. population mosaic formation process in Korean pine-broadleaved forest in the Sikhote-Alin mountain range in the south of the Russian Far East. The study was performed on two permanent sample plots (1.5 ha and 10.5 ha) established in virgin forest on the territory of Verhneussurijsky Research Station of the Institute of Biology and Soil Science, FEB RAS. One of the permanent sample plots (10.5 ha) was specifically designed for the study of population mosaics of tree species and covers an area required for the analysis of their structure. The population mosaic of the *P. ajanensis* was characterized for the first time. The mosaic was divided into sub-groups according to discrete description of the plants ontogeny. Four summary statistics developed for the study of point patterns was used for the analysis of population mosaic structure. It is shown that structure of mosaics formed by plants of different ages transforms from clustered distribution (immature plants) to an almost random (generative plants). Mosaic of adult plants is formed at the time of transition from immature to virginal age. Plant accumulation begins early in virginal age. Prolonged plants accumulation leads to the fact that certain groups overlap. Formation of large and expanding gaps in canopy is associated with the death of generative trees. Clustered distribution at various ages is related to heterogeneous environment and caused by history of local stand disturbance — spatial and temporal process of canopy gaps formation.

**Key words:** *Picea ajanensis*, spatial structure, population mosaic, Korean pine-broadleaved, the Russian Far East.

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