

RR5-4. Analysis of spatial-size-age structure and fire history of matured larch forest in eastern Siberia

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Abstract

According to quantitative analysis of spatial structure of matured larch forest, it was suggested that patch dynamics occur in relationship to fire disturbance. However, both of processes of fire disturbance and vegetation recovery have large variety. Therefore, case study with fine description of forest structure is thought to be valuable, still now. Here, we represent the forest history focused in tree age structure and fire history in quarter hectare plot in eastern Siberia.

The oldest tree was 274 years old. The histogram of tree age has peak on 235, 201, 162 and 126 years old. On the other hand, age of fire scar was 191, 158, 144, 60, 28 and 14 years ago. Because, 126 years old was the highest peak in the tree age histogram, if 126 years old trees were related to fire in 144 years ago, the fire was expected to be strong and large.

On the other hand, there were little trees that regenerated after 60 years ago. This fact represented the existence of the fire which is only disturbance but cannot be the chance of regeneration. Such a fire is thought to be important in population adjustment (i.e. fire thinning) and the process of canopy opening.