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Reconstructing the landscape structure of the Lena-Angara interfluve (south part of Eastern Siberia)

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Historical-geographical reconstructions of the landscape structure of territories developed in the remote past constitute the necessary element in the chain of research into the dynamics and the degree of transformation of geosystems caused by the influence of the natural regularities and anthropogenic factors. The objective of this study is to determine the specific features of the territory of the Lena-Angara interfluve in the late 19th – early 20th centuries in the interest of a subsequent different-time comparative analysis of the landscape situation.

An analysis of the features inherent in the functioning of the geosystems of the Lena-Angara interfluve was made by using, as an example, an elevated plateau with the sources of the Kuda river as well as of the Ilga and Kuda rivers. The relief is represented by a tableland with narrow crests of the watersheds, heavily dissected by a dense network of the valleys of rivers. The denudation processes created planate table-shaped elevations and plateaus whose range of absolute altitudes varies between 400 and 1000 m.

The analysis of the landscape structure showed that the study territory was the home for mountain-taiga dark-coniferous and deciduous classes of facies. Larch, spruce-larch and, in places, pine-larch subshrub-grass-moss forests grew within the basins of the Ilga and Kulenga rivers. The watershed spaces of the Ilga-Kuda interfluve, and also the slopes of the upper reaches of the Kuda river were occupied by Siberian stone pine and larch-spruce subshrub-moss groups of facies. In spite of the ubiquitous occurrence of taiga-forest ranges, most of them transformed to derivative groups of facies. Forest fires gave impetus to a widespread occurrence of coniferous/small-leaved complexes in burned-over areas.

The study area was poorly populated at the period under investigation; therefore, cultivated lands occupied very small territories. The upper reaches of the Kulenga river included small tracts of arable land which were sown as a test and as frost/freeze protection for grain crops. The meadow complexes in this territory are the result of the economic activities; therefore, they were concentrated mainly nearby human residence. The banks of the Ilga river were populated by Tungus tribes, who were engaged in hunting, because they fell short of meadow spaces. The upper reaches of the Kulenga were the home for uluses (inhabited summer localities of the Buryats) with nearby utuks, a peculiar kind of artificial meadows where grasses were not sown but grew by themselves, without any human participation.

The research done in this study forms part of the program focusing on the study into different-time characteristics of the landscape structure for the southern areas of the Angara-Lena interfluve. The findings will be compared with the contemporary landscape structure in order to determine the spatiotemporal specific character of variability in natural and transformed complexes.

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