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INFLUENCE OF VARIOUS FACTORS ON DYNAMICS OF SABLE NUMBER IN THE YUGAN NATURE RESERVE

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The "Yugansky" State Nature Reserve is situated on the territory of Surgut region of Khanty-Mansi Autonomous Okrug-Yugra and occupies 648636 hectares. Sable (*Martes zibellina* L., 1758) is the dominating species in the reserve' marten population. Population of sable in Yugan Nature Reserve was studied in 1988–2014. They calculated the number of sable by means of winter route accounts, which are usually carried out in February every year. Calculation of traces was done separately in the main habitats, and four types of habitats were ascertained. Those were dark-coniferous taiga (with prevalence of cedar, fir and fir-tree), light-coniferous taiga (with prevalence of pine), small-leaved taiga (with prevailing birch and aspen in the first tier and obligatory presence of dark-coniferous breeds in the second tier), and riding bogs (overhumidified treeless or covered with oppressed pine). The average long-term size of sable population in dark-coniferous taiga was 5,1 individuals /1000 hectares (from 2,5 to 8,1), 3,3 individuals /1000 hectares (from 1,6 to 6,4) in pine woods, 3,2 individuals /1000 hectares (from 1,6 to 5) in small-leaved taiga, and 0,7 individual /1000 hectares (from 0,1 to 1,5) in the bogs.

Sable counts within adjacent years can spike 3-fold in both directions. The status of the reserve assumes full withdrawal of the protected territory from economic activity. Therefore, the vast majority of causes of count fluctuations in the reserve have natural origin. Apart from intrapopulation regulation mechanisms, both climatic conditions, and food factor are powerful regulators of the population count. We used factorial analysis to process data file with a number of sable as a dependent variable, because of large pool of predictors. In total, we included 12 variables reflecting sable number fluctuations in various biotopes and the abundance of its main fodder objects (forest voles, squirrels, and pine nuts), as well as some climatic environment variables, such as annual amount of precipitation and average annual air temperature. We used on-year lagging to assess reaction of sable population to the parameters of external environment present in the previous year, along with food affordability. We ascertained four predictors explaining 75,4% of the overall variation. The size of sable count predictors' load reflected the response of its population to the biotic parameters, which were present in previous year (Bobretsov, etc., 2000). The first predictor, which explained 23,2% of variation, was the variability of temporary ranks of squirrel and annual amount of precipitation. The greatest contribution of the variable characterizing dynamics of sable population count was made by the second factor, explaining 19,2% of the overall variation. This predictor was the variability of temporary ranks of sable number in dark-coniferous and light-coniferous taiga, and on bogs. Factorial loading on these variables exceeded 0,70. The amount of precipitation was negatively associated with the sable count in these biotopes. The main contribution to the third factor (18,8% of variation) was made by the abundance of forest voles and sable count, inversely correlating with each other. That confirmed that the food range of sable was very wide and its abundance did not depend on any single type of forage. The fourth predictor (14,2% of variation) was a combination of two variables which factorial loading exceeding 0,80. That was the sable count in small-leaved taiga and the average annual air temperature, positively correlating with each other.