

POPULATION POLYMORPHISM OF RUSSET GROUND SQUIRREL (*SPERMOPHILUS MAJOR*) IN THE VOLGA REGION: DATA OF MORPHOMETRIC ANALYSIS

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Abstract. *Relevance and goals.* The study of population polymorphism is an important task of modern biology both from the perspective of theoretical ideas about the variability of biological items and biological diversity, and from the practical side of studying the laws of species existence within the historical area. Russet ground squirrel (*Spermophilus major* Pall.) is a proper model species for exploring individual and population variability due to changes in the structure of the range. The study was aimed at examining the individual and population variability of the morphological indicators of russet ground squirrel in the Volga Region and in adjacent territories, taking into account the fragmentation of their range. *Materials and methods.* The material for the study comprises the collections and data on the lifetime certification of individuals ($n = 412$) obtained in the course of research (2011–2018) of 55 populations of russet ground squirrel in the Volga Region and adjacent territories. The study of features of the body external morphology covered body length (L), metatarsus (PL) and tail (C) (in mm). Statistical processing of the results was based on standard statistical parameters, as well as cycle-by-cycle discriminant and cluster analyses. Statistical data processing was conducted in Microsoft Office Excel 2010 and STATISTICA 10.0. *Results.* The morphological analysis of populations and metapopulations of russet ground squirrel using the methods of descriptive statistics and variance analysis prevents reliable recognition of the existence of the fragmented structure of the range for this species in the study region. The cycle-by-cycle discriminant analysis of morphological indicators samples characterizing populations of russet ground squirrel in the study region revealed their good differentiation in the space of discriminant functions and enabled determining some features of the morphological variability of russet ground squirrel in the study region. Due to the wide range of variability compared with the Volga populations, the Ural populations of russet ground squirrel occupy an extreme position in a series of morphological changes. At that, right-bank populations are characterized by a more balanced composition and absence of sharp changes in morphological indicators. *Findings.* The statistical analysis of samples of russet ground squirrel morphological indicators revealed a heterogeneous population polymorphism associated with a strong fragmentation of the habitat, and confirmed the existence of the metapopulation structure of its range.

Keywords: russet ground squirrel, morphological variability, populations, metapopulations, Volga Region, Southern Urals.