

Summary

of PhD thesis of Sirma Asenova Zidarova

entitled

„Ecology of assemblages of common species from family Soricidae (Mammalia) in model regions“

Spatial distribution, population dynamics, morphometric variability and interspecific competition of 6 species of shrews, *Crocidura leucodon*, *C. suaveolens*, *Neomys fodiens*, *N. anomalus*, *Sorex araneus* and *S. minutus* (Mammalia, Eulipotyphla: Soricidae), are studied.

The analyses of shrew local assemblages from a variety of habitats in the area of Sofia basin, Vitosha and Lozen mountains show that their species richness and species variability increase in proportion to habitat heterogeneity and humidity and in inverse proportion to altitude. Abundance of shrews increases in proportion to prey abundance.

A comparative analysis of sex and spatial morphometric variability of the six shrew species is done on the basis of a great number of metric characters of skull samples from Southeastern and Central Europe. Different patterns regarding sexual differences in size are recorded in the two subfamilies. The two white-toothed shrew species exhibit clear male-biased sexual size differences, which are better expressed in *C. suaveolens* compared to *C. leucodon* as well as in Southeastern Europe compared to Central Europe. Conversely, red-toothed shrews do not display distinct sexual differences in size. Multivariation analyses reveal a smaller size of *C. suaveolens*, *C. leucodon*, *N. fodiens*, *N. anomalus* and *S. minutus* in colder climates (contrary to the Bergman's rule). In contrast to these five species *S. araneus* increases in size from south to north (in accordance with the Bergman's rule). The results of the analyses of the role of competition on the morphometric variability of the two species of water shrews are consistent with the hypothesis that *N. anomalus* has undergone a character release where it is allopatric from *N. fodiens*.