

FOREWORD

The second international conference “Population animal ecology” in the memory of Igor Aleksandrovich Shilov was initiated by the Biology Institute of Tomsk State University with the participation of RAS Theriology Society, department of vertebrae zoology of Lomonosov MSU School of Biology, “Vector” FBSC SSC of virus studies and biotechnology, Russian bird preservation union and EAS A.M. Nikolsky Herpetology Society. Such wide involvement of conference organizers illustrates fundamental value of I.A. Shilov’s ideas, which Russian scientists develop consistently.

The conference is mainly focused on reports reflecting the main directions of population studies, including genetic and physiological basis of population and species stability, interacting with the environment, as well as ecological strategies of population and species adaptation in the dynamic environment, heterogeneity and population special and temporal variability of various species.

The presentations will uncover genetic, physiological and ethological aspects of population structures, physiological control of reproduction, animal metabolism, and population change with epidemic risk.

This conference will shed light not only to population ecology, but also to other research agenda and heritage of I.A. Shilov, including formation of communities, which are resistant to the modern civilization conditions. The issue of wildlife efficient use and preservation remains relevant, with new fundamental underpinnings as a result of phylogeography, genetics and ethology studies.

I.A. Shilov’s ideas developed into a combination of various approaches in population studies and new methods implementation. We pay much attention to modeling as a tool of natural populations’ analysis and a way to study areal and ecological niches. Few reports on species prevalence and their areas dynamics will reflect on climate change trends. We also highlighted the issues of populations change in the urban environment and the effect of human activity on the fauna. Presentations on kingdom of viruses’ biodiversity and related threat to humans are also very timely, as are the ones on the effect of nanoparticles on living organisms.

In general, the conference materials draw a large-scale picture of fundamental and applied topics of population ecology, addressed both by Russian researchers and by their colleagues from Germany, Austria, France, Poland, Moldova, Lithuania and other countries presented in these conference proceedings.

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