

# WINTER WONDERS OF THE COMMON HAMSTER. PART II. WINTER ACTIVITY AND BURROW USING

(WITH SOME NEW FINDINGS DURING THE SEASON 2019)

Alexey V. Surov, Pavel L. Bogomolov, Natalia Yu. Feoktistova

*A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences  
33, Leninsky pr., Moscow 119071, Russia*

Unlikely our experimental plot in Gagarin Park in Simferopol was seriously destroyed by renovation activity, and the common hamster population was substantially declined. However the species has appeared in the closed area belonged to Federal Epidemiological Center and since last autumn we caught and marked 20 animals inside the enclosure less than 0.5ha. 6 of them were implanted by radiotransmitters and thermologgers, 3 camera traps were placed in front of the active burrows. It allowed us to follow the activity patterns, burrow using animal communication, temperature dynamics, etc. We found that at least one male did not hibernate at all and kept above the ground activity no matter the ambient temperature. It was registered at the camera trap regularly over the whole winter and changed several burrows. As we have shown before several animals used at the same burrows, but we never recorded two hamsters in one burrow simultaneously. So the camera trap proved oneself a useful instrument for the common hamster behavior with combining radiotransmitters and thermologgers especially.

A year ago, we talked about the revisions of our traditional viewpoints on the common hamster biology. During 2018-2019 we have continued monitoring the common hamster distribution by own route survey and internet searching. We found an exciting phenomenon - the range of the common hamster overlaps with reindeer (*Rangifer tarandus*) not only in North Siberia but in the South too, namely in Tyumen and Kuznetsy Alatau. It unambiguously testifies that both species belong to the same Fauna complex named Mammoths. This phenomenon explains some adaptations of the common hamster to survive in a wide range of conditions as low temperature, a tendency for omnivorous, hoarding, hibernation. High ability for this species to settle urban environment is also a confirmation of its high adaptability. We are finding a dozen new cities that occupied by the common hamsters every year both in Russia and in Europe.

Moreover, we note that the habitats' preferences of the common hamster are fundamentally changing. It can no longer be called an agrophilous any more but prefers structured landscapes with a complex microrelief, tree, and shrub vegetation with high grass. It is usually characteristic of settlements, gardens, etc. However, a similar habitat we found outside the ruderal and urban areas - in the "Duce of Leuchtenberg's Steppe" (60 km from Tambov). Here we discovered the settlement of the common hamster, which is characterized by high level of genetic diversity and population density.

The study was supported by RFBR #17-04-01061

E-mail: [allocricetulus@gmail.com](mailto:allocricetulus@gmail.com)