

# Food- and Territory-Dependent Mechanisms of Control over Population Density in the Hamster *Mesocricetus raddei* (Rodentia, Cricetidae): 1. Use of Space in Summer

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**Abstract**—Investigations were performed in two adjacent areas of agricultural landscapes in the mountain Daghestan (agricultural field and boundary slope). The breeding intensity (80–97%) and summer mortality (8–15%) did not differ significantly between these habitats ( $P > 0.05$ ). In spite of this fact, the hamster abundance on slopes (39–52 specimens per hectare) was always higher than that in fields (16–25 spm/ha); in autumn, the situation was quite different (100–130 and 80–91 spm/ha, respectively). The autumn distribution is determined by the character of intrapopulation relations. A historically formed system of permanent nest burrows, used by hamsters from generation to generation, is maintained on boundary slopes. After the end of dormancy (May–June), individuals with the highest social status occupy boundary slopes. In summer, a part of last-year offsprings and old (3–4-year-old) hamsters, as well as most of offsprings of the present year, are ousted from slopes into fields. This mechanism prevents slopes from overpopulation, maintaining the optimal population structure in this station. Probably, the population density in each habitat in spring depends on the winter mortality of hamsters (Communication 2).