environmental sciences proceedings

MDPI

Proceedings

Comparison of low- and high- density populations of red squirrels (Sciurus vulgaris L.) in Warsaw †

Agata Beliniak, Dagny Krauze-Gryz, Jakub Gryz and Karolina Jasińska

Abstract: The abundance of red squirrels can be approximately twice as high in urban habitats than in natural forests. One of the most significant factors that influence density is food availability. Aim of our study was to compare two populations with high (approx. 2 ind./ha) and low (0.29 ind./ha) population density inhabiting the same city, but different habitats: one natural forest reserve, closed for public and second busy urban park, where squirrels are often fed by people. We wanted to determine how these two populations differed in terms of health, body condition, sexual activity, and stress level. We conducted two trapping sessions: in 2012-2013 and in 2018-2020. In total, during first trapping we trapped and ear-tagged 18 individuals in forest reserve and 45 individuals in urban park, during second trapping 36 individuals in forest reserve and 107 individuals in urban park. Our very first results show that squirrels in the forest had on average higher body mass which may suggest better body condition. In turn, squirrels inhabiting urban park, started their year reproductive period earlier, which may be driven by year-round access to supplementary feeding. Moreover, contact with human was more stressful for squirrels from forest – breath rate of trapped squirrels was significantly higher. This study may be a proof that two populations inhabiting the same city may differ significantly in terms of population condition.

Citation: Lastname, F.; Lastname, F.; Lastname, F. Title. *Environ. Sci. Proc.* **2021**, *3*, x. https://doi.org/10.3390/xxxxx

Published: date