A 24-year investigation of the reproductive ecology of the Edible Dormouse (*Glis glis*)

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Abstract

The Edible Dormouse is a non-native rodent introduced to the Chilterns, UK, in 1902. It shows extreme annual variation in breeding; either having one litter per year or, in some years, failing to breed at all. Despite this slow reproductive rate compared to other rodents, its population is increasing, and has spread beyond the anticipated landscape barriers. Communal nesting is sometimes observed. This study aims to characterise the reproduction parameters over time, including from communal breeding.

Based on a population of >11,000 PIT-tagged individuals, 600 litters and 4000 nestlings at our Chilterns study site over 24 years, we show the best fit of the number of new-borns is an increasing exponential. Monthly weight of nestlings also increased over the 24 years, while annual reproduction rate, litter size and nestling growth rates remained unchanged. Litter size decreased from 6.6 new-borns in August to 4.3 in October, indicating an average death rate of 37% in the first two months of life. Preliminary analysis suggests a small decrease in death rate over the years. Average growth rate of nestlings was c.100% of birth weight per week in their first month, but then slowed. We also examined evidence of kinship between nest sharers and investigated whether this, or communal breeding in general, promotes offspring survival. Our results will provide a deeper insight into the factors that drive the reproductive success of this invasive species and enable investigation of the effect of climatic variables on the number, survival and growth rate of nestlings.

Keywords

Glis, reproduction, growth, survival, offspring

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Presented at

Oral presentation at the 11th International Dormice Conference 2022

Conflicts of interest