

# Settling in: space utilization behaviour of translocated Hazel Dormice (*Muscardinus avellanarius*)

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## Abstract

The Hazel Dormouse (*Muscardinus avellanarius*) is protected under the EU's Habitat Directive and its national implementation, whereby physical harm to individuals as well as the destruction of breeding and nesting sites is prohibited. Within the context of inevitable environmental impacts these protection goals are not always maintained. Therefore, mitigation and compensation measures to secure a population's viability are required.

For sedentary and less mobile species like the Hazel Dormouse, mitigation often includes the translocation of individuals to a different habitat patch. In 2017 and 2018 a total of 108 individuals were translocated from an old growth oak-hornbeam forest to an area that was re-forested 40 years ago. Prior to translocation, individuals were equipped with a radio transmitter and they were followed for three consecutive nights and one control night, during which bearings were taken every five minutes using the triangulation technique. A control group of established Hazel Dormice was followed in the same manner. Nests and resting sites were searched for during the daytime.

Twelve male Hazel Dormice were radio-collared and between 234 and 427 bearings were taken per individual. Resting sites of translocated dormice were mainly located within the forest canopy (33.3%). Furthermore, individuals were often found active during the daytime. Mean activity range size (MCP) and resource search areas (LoCoH 95 %) were larger in translocated dormice, whereas the mean core habitat size (LoCoH 50 %) was larger in established dormice. The activity range during all of the monitored nights overlapped significantly more in established dormice, demonstrating exploratory behaviour by translocated individuals.

## **Keywords**

telemetry, Hazel Dormouse

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## **Conflicts of interest**