

Nocturnal space and habitat use by Garden Dormice in an urban area in Germany

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Abstract

The Garden Dormouse (*Eliomys quercinus*) is currently disappearing from parts of its former range. While its population is declining in many parts of Germany, a stable occurrence is found in the city of Wiesbaden. A radio telemetry study was conducted to investigate nocturnal activity and habitat use.

Three males and one female were tracked for six weeks from May to July 2021. Males weighed 85 ± 15 g ($n = 6$), females 63 ± 8 g ($n = 2$). Home ranges were calculated using the minimum convex polygon (MCP) method. Males had larger home range sizes (MCP100: 2.69 ± 1.8 ha, $n = 3$) than females (0.53 ha, $n = 1$). The home ranges of males overlapped. Males regularly crossed roads up to 16 m wide. Animals exhibited nocturnal behavior with sporadic activity at dusk. Garden Dormice preferred structures with more than 75 % cover from a bird's eye view and 50 % cover when viewed from the side. Broad hedges were strongly preferred over single shrubs and trees or structures without vegetation. They were used by the animals for foraging, mating, as a place for other interactions, and as protected pathways through the habitat.

The smaller home range sizes compared to previous studies may be due to good food availability in the city. Animals also seem to benefit from continuous habitat and high levels of plant cover. Recommended conservation measures include maintaining and promoting broad hedges and habitat connectivity.

Keywords

In Search of the Garden Dormouse, radio tracking, habitat use, urban habitat, hedges

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