

Home ranges and activity of Garden Dormice in the Harz Mountains, Germany

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Abstract

For the conservation of endangered species, a good knowledge of their biology is essential. However, due to the secluded lifestyle and nocturnal activity of the Garden Dormouse (*Eliomys quercinus*), comprehensive research on these small mammals is difficult, resulting in a lack of data. Little is known about the habitat requirements of Garden Dormice in forest habitats. Radio tracking was used to analyze movement patterns to identify specific features of their habitat in the Harz Mountains National Park in Germany (~700 m a.s.l.). Four individuals (2 females, 2 males) were tracked during 11 weeks from May until September 2021. Home ranges were calculated using minimum convex polygon (MCP) and fixed kernel density estimation (KDE) methods. Home range sizes (100% MCP) of males were between 0.58 ha and 7.62 ha and of females between 3.63 ha and 6.39 ha. The size of the core areas (65% KDE) was 0.25 ha - 3.08 ha for males and 1.94 ha - 6.18 ha for females. Whereas the start of their daily activity did not correlate with sunset, the end of activity was associated with sunrise. The females never switched their nesting sites, but the males used 7 -10 nesting sites. Nesting sites were located between boulders and inside deadwood piles. Deadwood is an important habitat for insects which serve as food for Garden Dormice (and other small mammals). To this species in its natural habitat it is necessary to sustain deadwood in forests.

Keywords

In Search of the Garden Dormouse, radio tracking

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