

Diel activity patterns of Garden Dormice (*Eliomys quercinus*) assessed by camera trap data

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Abstract

Garden Dormouse populations have been decreasing in range and declining in number throughout Europe. Understanding, and therefore preventing, this decline is urgently needed. To devise effective conservation strategies, it is essential to gain knowledge on activity patterns of the target species. Diel activity patterns of Garden Dormice (*Eliomys quercinus*) were investigated at 25 different sites in Germany. Through an intensive camera-trap survey from March to October 2020 a total of 192,136 pictures were recorded in over 3,682 camera-trap days. The association between activity and environmental parameters, such as habitat (urban vs. natural), the lunar phase and sunrise and sunset, was investigated. Garden Dormice were found to be predominantly nocturnal, but were occasionally active during the day in the summer months. The peak of activity at all sites was shortly before midnight. Garden Dormice in this study did not arrange their activity according to the lunar phase. Daytime activities could be related to the presence of young or the food supply. Weather conditions and cloud cover could explain the small influence of the lunar phase on the animals' activity. This study revealed the effectiveness of camera trapping to gather information on activity of an elusive small rodent with minimum disturbance to the animals. The data was useful for analyzing and understanding diel activities in different habitats.

Keywords

In Search of the Garden Dormouse, wildlife research, photographic sampling, phenology, non-invasive monitoring

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