

Acoustic detection of Garden Dormice: a field mapping study in an urban habitat in Germany

Teresa F. Nava^{‡,§}, Pamela J. Burn[§], Sven Büchner^{‡,|}, Holger Meinig[‡], Johannes Lang[‡]

‡ Justus-Liebig-University Giessen, Clinic for birds, reptiles, amphibians and fish, Working Group for Wildlife Research, Frankfurter Strasse 114, 35392 Giessen, Germany

§ Justus-Liebig-University Giessen, Working Group for Behavioral Ecology and Ecophysiology Institute of Animal Ecology and Special Zoology, Heinrich-Buff-Ring 26-32, 35392 Giessen, Germany

| Senckenberg Museum of Natural History Görlitz; Am Museum 1, 02826 Görlitz, Germany

Corresponding author: Pamela J. Burn (p-burn@gmx.de), Sven Büchner (muscardinus@gmx.net), Holger Meinig (holger.meinig@t-online.de), Johannes Lang (johannes.lang@vetmed.uni-giessen.de)

Abstract

Garden Dormouse populations have been decreasing in range and declining in number throughout Europe. For effective conservation strategies, it is important to know where and in which habitats the species still occurs. Effective monitoring methods are therefore urgently needed especially because Glirids are difficult to monitor due to their nocturnal activity and their relatively low population density. The city of Wiesbaden (central Germany close to the River Rhine) harbors a stable Garden Dormouse population. In summer 2019 a field mapping study was conducted in which the occurrence of this species was investigated. During the summertime detection of the animals, based on their characteristic vocalizations, was used for the first time to map the occurrence of the species. Within 20 nights we obtained 128 acoustic detections of Garden Dormice, involving at least 168 individuals, and resulting in records for 55 out of 61 km² grids investigated. In Wiesbaden, the species is widespread and could be easily detected by its calls. It was found over almost the whole area, mainly in semi-open areas like gardens and allotments, but also in highly built up and cultivated areas, right in the immediate vicinity of humans, and in some cases even inside buildings. Thus, the Garden Dormouse has successfully adjusted to a life in an urban environment. Using this simple, cheap, fast and non-invasive method can provide many data for biodiversity monitoring and should therefore be given more consideration in future surveys.

Keywords

In Search of the Garden Dormouse, acoustic monitoring, detection method, field mapping, distribution

Presenting author

Teresa F. Nava

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