

Title: Microhabitat Requirements of Hazel Dormouse in Deciduous Woodland. *University of Bristol dissertation project, 2009.*

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Background to Study:

The optimal habitat for dormice is widely considered as deciduous woodland with a well-developed understorey and shrubby habitats. However, to fully understand the complex habitat requirements of dormice it is suspected that a greater depth of knowledge at the microhabitat level may be required. To date only limited research has been undertaken in this area and a multivariate study has never been carried out. This project aims to determine which of the microhabitat features within deciduous woodlands influence dormouse nest box choice.

Method:

- Dormouse occupancy was measured using 20 nest boxes at 3 sites.
- 35 habitat parameters were recorded at each nest box including stem density, species diversity, box host species, canopy closure, honeysuckle presence/absence, % cover of shrubs, % bare ground. These were measured at 6 different habitat strata's; overstorey, understorey, shrub level, herb level, woodland floor, litter.
- Correlations were established between dormouse occupancy and habitat variables.

Key Results:

- Presence of hazel, species diversity of understorey, dormouse occupation of closest nest box and high density of woody stems positively correlated with dormouse nest box occupation.
- Proximity to adjacent nest box and distance to closest understorey tree were negatively correlated to dormouse occupation.
- Nest boxes located on hazel trees accounted for 95% of recorded dormouse presence.
- For every unit increase in diversity of understorey species the probability of dormouse nest box occupation increased by 4.3 and by 1.3 times for every unit increase in density.

Key messages to landowners and managers derived from these results:

- Coppicing hazel woodland is recommended as this provides favourable habitat for dormice that prefer a well established diverse understorey for food resources and locomotion.
- If monitoring for dormice using nest boxes, erecting them on hazel trees, within areas of high shrub species diversity and a high density of woody stems (<1 m of box) may increase their occupation rate.
- Nest boxes should be placed less than 20 m apart to maximise chances of occupation.

Key words/phrases

Hazel Dormouse; *Muscardinus avellanarius*; nest box; microhabitat preference; hazel coppice, habitat preferences; deciduous woodland; understorey