

Title: Hedgerows and biodiversity: formulating management for dormice, *Royal Holloway Interim Report, 1999*

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Background to study

Recent studies have suggested that hedgerows may be important to dormice as dispersal corridors and permanent refuge, however little is known about how to manage hedgerows to promote their use by dormice. Currently the management of hedgerows is primarily by mechanical means and potentially detrimental to dormice and other species. Guidance on practical management to promote the value of hedgerows for dormice and other species is required.

Methods

- Dormouse nest tubes were placed within 30, 2 km hedgerows in Sussex, Kent and Devon. 100 nest tubes were placed at 20 m intervals along each hedgerow, 9 of which were overgrown and 21 heavily cut. Tubes were set up in May and checked in both June and September-October.
- Habitat variables recorded included height, width, profile, base vegetation density, bank presence, cover of species and species diversity.
- Eight dormice were captured within hedgerows and radio collared, four were resident and four were found to be transient juveniles.

Key Results (Preliminary)

- A total of 84 dormice and 198 dormouse nests were found within hedgerows in October.
- Adult dormouse abundance was strongly related to hedgerow width and dormouse presence was associated with wide, tall hedgerows with high shrub diversity that had not been cut for two or more years. Juvenile dormouse abundance related to width and diversity of hedgerows but to a lesser extent than adult abundance.
- Dormice were significantly more abundant in Sussex hedgerows than those in Kent and Devon, despite Devon having more diverse hedgerows in comparison to the other two regions.
- Resident radio collared dormice had larger home ranges (<400 m) in comparison to those recorded within woodland habitats (<140 m).
- Transient radio collared dormice dispersed <500 m within hedgerows into adjoining woodlands. One individual crossed a narrow tarmac road between two hedgerows during their dispersal movement.

Key messages to landowners and managers derived from these results

- Hedgerows are clearly utilised by dormice as permanent residences and as dispersal corridors, therefore maintaining them within the landscape is important to maintain and promote dormouse distribution.
- Heavy management of hedgerows may discourage their use by dormice that prefer uncut, wide, tall and species rich hedgerows.
- Maintaining connectivity within and between hedgerows is important for resident dormice who exhibit long home ranges to obtain adequate resources.
- Small gaps within hedgerows do not appear to present a barrier to dispersal but may increase the risk of predation for dormice.

Key words/phrases

Dormice; *Muscardinus avellanarius*; hedgerows; nest tubes; dispersal; radio tracking; gaps