

**Title:** Hazel dormouse *Muscardinus avellanarius* nest site selection in hedgerows, *Mammalia*, 2009

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### **Background to study**

Research suggests that hedgerows can provide good quality habitat for dormice and can support both resident and dispersing individuals when food resources and suitable hibernacula are available. Few studies have determined the nesting preferences of dormice in hedgerows as sampling commonly uses nestboxes or nest tubes. Information on the natural nesting behaviour of dormice in hedgerows is required to help direct management to ensure secure nesting sites are available.

### **Methods**

- Species rich hedgerows (>160 yrs) dissecting grazed farmland were surveyed for natural dormouse nests during autumn from 2005 and 2007.
- 35 hedgerows were surveyed extensively on one farm and 8 hedgerows found to support dormouse nests were located on adjacent farms.
- All hedgerows were on top of 2 m high earth banks, between 1-3 m wide at base and managed using a mechanised flail. Each hedgerow was categorised as either cut or layed within the last 6 years (16) or not (27) and the height, width and width of scrubby margins was recorded.
- Where nests were present, measurements of height above ground, location relative to centre of hedgerow, aspect and plant species supporting nest were recorded. Nests were categorised as shelter nests (8-10 cm diameter) or breeding nests (12-15 cm diameter)

### **Key Results**

- A total of 73 dormouse nests were located in 26 different hedgerows. There was no difference between hedgerows with and without dormouse nests.
- Nest density in 2007 was at least one per 78 m and the majority of nests were located within 1 m of the ground (63%) and no nests were located above 3 m.
- Dormice showed a preference for nesting in blackthorn which supported the most number of nests, over oak or willows which were two of the most frequently observed species. Bramble, field rose and holly were also important nesting sites whereas no nests were located in hazel despite it being the most frequent species.
- Dormouse showed a preference for nesting in tree and shrub species within hedgerows cut at least once in the last 6 years and 78% of nests were located just above the cut line where multiple-stemmed forks had been created.
- In hedgerows that had not been cut in the last 6 years, dormice preferred nesting in bramble and rose margins despite having similar frequency of tree and shrub species to cut hedgerows.
- No preference was found for nesting in taller or wider hedgerows or with specific aspects.

### **Key messages to landowners and managers derived from these results**

- Allow wide bramble and rose margins to develop along hedgerows as these provide important nesting and foraging sites for dormice.
- Cutting some hedgerows on a 3-6 year rotation is recommended to create a dense structure with multi-stemmed forks to provide secure nesting sites for dormice and will be of particular benefit for hedgerows dominated by thorny species or where scrubby margins are absent. Manage other hedgerows on a longer rotation to provide different food resources for dormice.
- Use a species rich mix and incorporate thorny or prickly species when establishing hedgerows.
- Use natural nest searches alongside nest boxes and tubes to establish dormouse presence.

**Key words/phrases**

Dormice; *Muscardinus avellanarius*; nest site; hedgerow; blackthorn; margins