

**Title:** Behaviour of specialist species in habitat corridors: arboreal dormice avoid corridor gaps, *Animal Behaviour*, 1998

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### **Background to study**

Dormice frequently occupy small woodland patches connected by hedgerows, but are less common in regions where hedgerows are scarce. This suggests that hedgerows may facilitate the movement of dormice across landscapes and as such help in maintaining viable populations by counteracting negative impacts of population isolation. Understanding how dormice utilize hedgerows and the factors that influence their movement are important considerations for dormouse conservation.

### **Methods**

- 12 adult dormice (11 male, 1 female) were live trapped, radio collared and temporarily released at three sites representing different dispersal routes; 1 uncut hedgerow, 1 cut hedgerow and a grass field. Both hedgerows were uninhabited by dormice and had gaps of 1, 3 and >6 metres and were of similar species composition but varied in their structure (uncut = taller and wider).
- Individuals were released on independent occasions and each tracked for one night per treatment after which they were re-captured and returned to their source site. The weight before and after release was recorded.
- Data on location, height (hedgerows), among shrub flowers (uncut hedgerow) and motion of individual (still or moving) was collected at 2 minute intervals.

### **Key Results**

- Dormice travelled faster and further in cut hedgerows than in uncut hedgerows and 7 dormice were observed at food sources in the uncut hedgerow.
- Dormice did not orientate towards woodlands located at one or either end of hedgerows
- Individuals were significantly more likely to cross smaller hedgerow gaps (1 m) than larger gaps (>6 m) which were never crossed.
- Dormice exhibited significantly more movement and lost more body mass when released into the field site compared to hedgerows. Two individuals orientated towards the nearest hedgerow or woodland and nine moved diagonally across the field. All individuals appeared to orientate towards their source site.

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

- Hedgerows are a valuable habitat that are likely to facilitate the dispersal of dormice in comparison to field habitats as the majority of individuals in this present study showed an affiliation to their source site and escape behaviour rather than demonstrating signs of dispersing to new suitable habitat.
- Large gaps in hedgerows (>3 m) could present a significant barrier to dormouse movement and filling in gaps should be practised to promote successful dispersal between habitat patches.
- Uncut hedgerows may provide refuge for dispersing dormice due to increase food availability
- Managed hedgerows without food sources may promote dormouse movement across the landscape but may come with increased risk of starvation if suitable habitat is not within the fasting endurance of a dispersing individual.

### **Key words/phrases**

Dormice; *Muscardinus avellanarius*; radio tracking; hedgerow; movement; gaps; dispersal