

**Title:** Dormice on Road Verges. *Ecology and Environmental Management in practice, 2005*

**Author:** L Garland & M Woods

**Country:** England

### **Background to study**

Road developments are considered a major contributor to the fragmentation of dormouse habitat and in turn may have contributed to the reduction in dormouse distribution in the UK. Road verge habitat makes up approximately 1% of land area and might therefore provide important permanent habitat and dispersal corridors for dormice; however these areas are subjected to minor roadside management practices. Information on the ecological potential of road side habitats and mitigation against routine maintenance will help direct highways and species conservation schemes

### **Method**

- Wooded habitats along 3 major roads (M5, M4 and A303) were surveyed for dormouse presence using nest tubes and presence of hazel nuts gnawed by dormice. Records of dormice within 500 m of the roads were also obtained from local Biodiversity Record Centres.
- Suitable habitat size was estimated using roadside and adjacent land cover including areas separated by <5 m wide. Suitable habitat separated by >250 m were considered independent.
- The connectivity of suitable sites was categorised as 'poor' when the site was isolated by roads or lacked suitable continuous habitat for dispersal between sites or 'reasonable' when sites were connected via unbroken hedgerows, woodland strips or contiguous scrub.
- Population size was estimated based on habitat size and quality with 4-10 adults plus juveniles occupying optimal habitat of diverse deciduous woodland with abundant shrub understorey.

### **Key results**

- Evidence of dormice was found at 8 sites, of which 7 were previously unknown. The estimated abundance based on habitat quality ranged from 19-49 dormice occupying each site.
- The average size of occupied site was 4.8 ha (range 1-20 ha) of which c. 45% represented road verge habitat and in 3 cases the road verge amounted to 60-100% of available habitat.
- Occupied sites were either roadside plantation and scrub or old woodland and 3 of the sites were poorly connected to other suitable habitat.
- The presence of dormice in an isolated relatively young roadside plantation, suggested individuals are capable of crossing minor roads and grassland with patchy scrub (250 m).

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

- Road verges can provide suitable habitat for dormice to colonise or disperse through and due to under recording these areas should be surveyed extensively despite their size or isolation and especially if dormouse records exist within the local area.
- When clearance of trees and shrubs is required for works access, stands should be coppiced (10-15cm above ground) by hand over winter, when dormice hibernate on the ground. Cut material should be removed from site on foot and not dragged and small piles of it left by cut stumps to help minimise the change in microclimate. Dormice emerging from hibernation in spring will be displaced and by May it should be possible to undertake the necessary works.
- When more rapid works need to be undertaken, small (<0.1 ha) areas may be cut by hand immediately after an extensive search for dormouse nests by a skilled license holder. Nest boxes should be available to move dormice by attaching box to adjacent tree. Searches should only be conducted between May-June inclusive to avoid disturbance of breeding nests.

- A continuous connection of trees, shrubs or bramble should be maintained in clearance areas to facilitate displacement and dispersal through the site and a high species mix of trees and shrubs should be planted in adjoining habitat to compensate for losses resulting from clearance work.
- New planting should include a high diversity of species and link to existing suitable habitat and/or hedgerows to create dispersal routes for successful colonisation of viable populations
- Linking roadside plantations with existing suitable woodlands and hedgerows will increase the value of road verge habitats for viable populations and as suitable dispersal corridors.
- In all instances, advice on relevant licensing requirements should be sought.

**Key words/phrases**

Dormice; *Muscardinus avellanarius*; road side habitat; dispersal; road verge management; mitigation