

**Title:** Local Impact of the tawny owls (*Strix aluco*) on the common dormice (*Muscardinus avellanarius*) in Lithuania, *Ekológia*, 2004

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### **Background to study**

Research suggests that common dormice form a small proportion (0.5-3.5%) of the diet of tawny owls and as such should have little impact on dormouse populations, however a few studies have documented that dormice can form c. 10% of all small mammals caught by owls. This indicates that tawny owls could have a larger localised impact on dormice than previously thought, highlighting a possible threat to a low density species with localised distribution.

### **Method**

- Capture-mark-recapture study of dormice was carried out within 60ha of forest in south-western Lithuania between 1984 and 1990 using 262 nest boxes placed at 50m intervals. Encountered dormice were uniquely marked with number aluminium rings.
- A nest box for tawny owls was put up approximately 0.8 ha from edge of study site and tawny owls successfully nested in 1986 and 1987. Their food remains were analysed over this time, allowing identification of hunting area (2 ha) and impact on dormice within study site

### **Key results**

- At least 4 out of 70 marked dormice were predated by tawny owls which had travelled between 1100 – 1600 m to hunt.
- Dormouse density within 2 ha hunting area decreased to 0 ind/ha during 1986 and was only recolonized by dormice the following year which indicating low population densities in adjoining areas of woodland.
- The overall density of dormice across the 60 ha study sites remained relatively stable between 1985 and 1987.

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

- Tawny owls can have a local negative impact on dormice populations, especially when dormice are occupying small isolated sites and at low densities. Erecting owl boxes within 1-2km of such sites, especially when dormouse habitat is not particularly dense may threaten the viability of the resident dormouse population. The impact of different owl species however is currently undetermined.

### **Key words/phrases**

Common dormouse; *Muscardinus avellanarius*; tawny owl; *Strix aluco*; Lithuania; predation; nest box; density; local impact