

Title: Habitat requirements of the common dormouse (*Muscardinus avellanarius*) and the fat dormouse (*Glis Glis*) in mature mixed forest in Lithuania, *Ekológia (Bratislava)*, 2008

Author: R Juškaitis and V Šiožinytė

Country: Lithuania

Background to study

Lithuania occurs in the northern part of the distributional ranges of the common dormouse and the fat dormouse where both species are found within mature mixed forest stands consisting of Norway spruce, pine and oak. The habitat differs from that found within central and southern Europe, as does the status of both species where common dormice are widespread and fat dormice are red-listed. Information on habitat preferences is subsequently important to help direct management of woodlands where both species naturally occur.

Method

- 30-35 nest boxes were placed 3-4 m high within primarily old hazel along the rides of a mature 75-180 years old mixed forest in central Lithuania. Nest boxes were at 50 m intervals and monitored for the presence of both dormouse species in May/June and September between 1991 and 2005.
- The utilization of nest boxes was categorised as not used; short-term use; long-term use for one season and used for breeding.
- Habitat parameters were recorded within 2500 m² area around 31 nest boxes and consisted of 72 variables that assessed species composition, density of species, stumps, canopy cover, food source availability and forest stand age.

Key results

- The fat dormouse utilized nest boxes significantly more than the common dormouse and differences were attributed to differences in habitat requirements and possible competition.
- The development of forest understorey was positively associated with common dormice that utilized nest boxes where hazel and honeysuckle occurred in greater numbers and particularly where hazel was more mature covering >4 m².
- Common dormice avoided areas which had high numbers of coniferous trees and showed a preference for older forest stands where the number of logs lying on the ground was greatest.
- Fat dormice showed a preference for areas which had a high number of coniferous trees in the canopy and a high cover of oak trees. Areas of thinned out forest stands with frequent dead trees and logs lying on the ground were avoided.

Key messages to landowners and managers derived from these results

- Maintaining connectivity between canopy and shrub layer is important for both dormice species.
- In mature forests, maintaining shrubby areas, particularly of hazel in blocks and along rides and allowing natural thinning of mature trees in older stands to establish new areas of understorey will help to maintain/create suitable habitat for the common dormice.
- Areas of mature oak and conifer should be maintained and where clear felling is required, management units should prevent fragmentation of this habitat or if necessary dispersal routes with good connectivity within the canopy should be maintained to allow movement across clearfell sites. This will benefit both species.

Key words/phrases

Dormice; *Muscardinus avellanarius*; forest stands; understorey; canopy; nest boxes; hazel; honeysuckle; Lithuania; logs; conifer