

Title: Foraging behaviour of dormice *Muscardinus avellanarius* in two contrasting habitats. Journal Zoology, London 1993

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Background to study

The common dormouse has no caecum, suggesting it is likely to be a specialist feeder concentrating on high energy, high protein foods which need to be sought out individually. This paper aims to describe dormouse foraging & feeding behaviour in relation to seasonal changes in potential food availability in woodlands of contrasting species diversity & examine which trees dormice select for foraging, assessing how they are constrained by availability & dispersal of food sources. Findings are discussed in relation to habitat requirements & woodland management for dormice.

Methods

- Two separate woodland areas were studied, one low growing, uncoppiced for 50 years with hazel as the dominant scrub & low abundance of bramble (SOM) and the other an 8 year rotational coppice regime with hazel as dominant scrub & abundant bramble (HER).
- Dormice were captured in nest boxes & fitted with radio collars and tracked for 6-8 nights per session with 4 sessions spaced through the summer. Tracked individuals were approached to 5m to ascertain tree species & where possible observed foraging patterns were recorded.
- Tree flower & fruit phenology was recorded to estimate temporal availability of potential food. Five individuals of each tree species, honeysuckle & bramble were monitored weekly (May–Oct) for hard mast (nuts, winged seeds, acorns) or soft mast (berries).

Key results

- Tree flowers were available for approx. 2 weeks whilst ripe fruits & seeds available for longer, there were periods when almost no flower or fruit was available.
- Dormice feed selectively within hawthorn & sycamore spending long periods of time searching for flowers at particular maturation stages but no foraging was recorded in trees producing small seeds (birch, willow, aspen) even when they appeared in high density.
- Tree utilisation closely followed tree flowering and fruiting phenology with honeysuckle and bramble considered important providers of food during midsummer when little else is available.
- In spring & early summer dormice will enter diurnal torpor to assist survival during lean period
- When soft & hard masts were available at the same time the soft mast was preferred.

Key messages to landowners and managers derived from these results

- Dormice require a high diversity of native fruit bearing tree species that provide successional food resources from spring through to autumn.
- Shrub and tree density is important to provide dormice access to food resource within a small area to compensate for their small home range sizes.
- Honeysuckle and bramble are important resources for dormice but are not essential if alternative food sources are available.
- Long rotational (10 yr) coppice-with-standards management is recommended for provision of a dense, productive understorey which is not overshadowed by canopy trees.
- Honeysuckle is intolerant of disturbance so leaving some areas of woodland uncut is recommended to provide a favourable resource for resident dormice.

Key words/phrases

Muscardinus avellanarius, foraging, nest boxes, woodland management, coppicing, radio tracking