

Title: The ecology of coppiced hazel (*Corylus avellana*) and dormice (*Muscardinus avellanarius*) in West Sussex: the effects of age and stand dynamics. *BSc Dissertation – University of Brighton 2009.*

Author: T. Crouch

Country: UK

Background to study

Historically, coppice woodland management was frequently used across the UK and woodlands typically consisted of different aged blocks of coppiced underwood with standards which were separated by grassy rides. It is thought that this is the preferential habitat for the common dormice, however coppice management has declined in British woodlands. Information on the benefits of coppicing regimes would help inform on dormouse conservation.

Methods

- Stratified random sampling was used to collect data from 6 areas of coppice with different rotation lengths within a deciduous woodland. Sites were selected to investigate both year on year changes as well as changes over longer time periods.
- Variables recorded at each site were: density of *C. avellana* trees within a 10m x 10m section of each site, light levels, moisture, tree age, total No. stems at ground level, stem circumference, nearest neighbour, seed viability, No. seeds per tree, ground vegetation.
- Dormice were monitored using nest boxes (n=300) throughout the woodland as part of National Dormouse Monitoring Scheme and all study sites were adjacent to nest box patches. Analysis of dormouse presence relating to coppiced sites was undertaken alongside an assessment of longitudinal occupancy of nest boxes using a 15 year dataset from the site.

Key results

- Larger, older *C. avellana* stools are able to support more stems of larger circumference than younger stools, this is positively correlated with time since coppicing, summer temperature during first growth season, light and nearest neighbour density.
- Ground flora species diversity decreases as time since coppicing increases but increases with increase light and moisture, however shade tolerant woody species subsequently decrease.
- Coppice sites of between 7 & 9 years since last coppice provide optimum habitat for dormice, however abundance of dormice does not appear to be correlated with coppice management.
- In 3 of the 15 years, all signs of dormouse presence were obtained from nest box sites adjacent to coppiced blocks. In 2 of the monitoring years, dormice were absent from these areas.
- The number of dormice recorded within the woodland over 15 years was variable and in some years, no individuals were recorded. The number of litters per annum was negatively correlated with the mean number of air frost days.

Key messages to landowners and managers derived from these results

- *Corylus avellana* should be coppiced on a long rotation to allow species re-growth, flower and fruiting in sufficient amounts within the woodland. Coppicing should be carried out in blocks at different stages and where possible favourable stages should be adjacent to each other to allow dormice to exploit these without increased travel costs between sites.
- Fragmented habitats should be linked with habitat corridors such as branches spanning rides to increase area of suitable habitat and assist with dispersal.
- Oak standards can provide important nest sites for dormice, particularly in mature coppice and should be retained.

- Dormice are not confined to coppiced areas within woodland sites and their utilisation may vary between years. Surveys for dormice should be conducted annually in different habitat blocks, especially prior to any management or development works.

Key words/phrases

Corylus avellana; *Muscardinus avellanarius*; nest boxes; seed production; coppice woodland management