

The Hazel Dormouse

Introduction

Tucked up inside a tree hollow, the hazel dormouse is a shy secretive species that spends its life up in trees, rarely coming to the ground. The hazel or common dormouse *Muscardinus avellanarius* is one of Britain's most endangered mammals and is listed as vulnerable to extinction in the UK (Wembridge et al., 2019).

Due to their rarity and specific habitat requirements, dormice are considered flagship species for woodland conservation, and bio-indicators of habitat condition. This makes them an ideal species to monitor to help assess both woodland reserves and living landscapes.

 **Check out the award winning video by Ellie Bladon on our dormouse project**
wildlifebcn.org/dormouse

A licence holder carefully holding a sleepy dormouse after it has been weighed. Monitoring is essential to ensure that reintroduction programmes are working. Photo © Alistair Grant

Dormouse ecology

Dormice are specialists of early-mid successional woodland and hedgerow habitats (Bright, Morris and Mitchell-Jones, 2006). They are arboreal, living up in the woodland canopy and rarely coming down to the ground. They are reluctant to cross open spaces where they are vulnerable to predation (Bright, Morris and Mitchell-Jones, 2006). This means that they require interconnected woodlands, hedgerows and scrub. High forests are less suitable since the dense canopy shades the understory meaning there are fewer flowering and fruiting shrubs, a key food resource for this species (Juškaitis, 2007).

Their optimal habitat is coppiced woodland with sensitive management of rides and glades, together with rotational coppicing. This creates a suitable mix of early successional trees and shrubs (Bright, Morris and Mitchell-Jones, 2006; Juškaitis, 2007). Small woodlands cannot sustain healthy dormouse populations and connection with other woodlands is key (Bright, Morris and Mitchell-Jones, 2006).

The hazel dormouse is an elusive species due to their rarity and nocturnal habits (Bright, Morris and Mitchell-Jones, 2006). The 'dor' part of their name comes from the French for sleep as they have a long hibernation over the winter when there is not much food around (Bright, Morris and Mitchell-Jones, 2006).



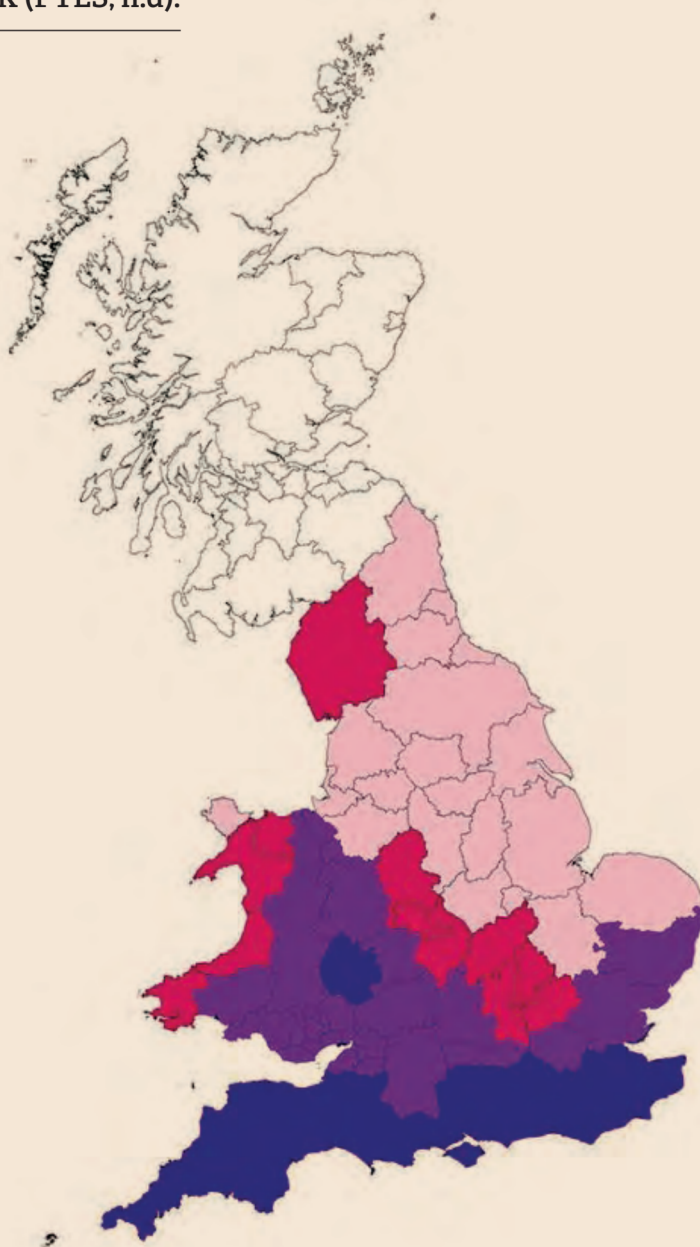
Dormouse distribution

In Britain, the hazel dormouse is largely restricted to southern England, Wales and the Welsh borders, with a single population in the Lake District (I. White, 2020, pers. comm.). They are found in low densities, even in the best habitats. The distribution of this species has shrunk dramatically and it is now extinct in half of its former range (Bright, Morris and Mitchell-Jones, 2006). In our three counties, the species is scarce with records primarily in the Rockingham Forest area in Northamptonshire. They are also found on the borders of Bedfordshire and Northamptonshire with Buckinghamshire. There are two populations in Cambridgeshire.

Current dormouse distribution in the UK (PTES, n.d).



- Frequent
- Present
- Rare
- Absent



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trust for
endangered
species

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Dormouse distribution across the three counties based on data held in the National Dormouse Database (NDD), PTES (2020)



Dormouse conservation

The hazel dormouse is a European protected species on the edge of its European range in the UK. It is classed as Vulnerable or possibly Endangered due to this range contraction and decline in populations (Wembridge et al., 2019; Mathews and Harrower, 2020). Populations have been monitored for longer than any other British mammal and these studies have shown that numbers of this species have halved since 2000 (Wembridge et al., 2019). This decline is due to the loss, fragmentation and inappropriate long-term management of woodlands and hedgerows (Bright, Morris and Mitchell-Jones, 2006).

Brampton Wood

Designated as a Site of Special Scientific Interest (SSSI) in 1954, Brampton Wood is an exceptional example of ancient woodland and the second-largest woodland in Cambridgeshire. At least 900 years old and spanning 132 hectares, the woodland hosts a myriad of plant, animal and fungi species. Following a successful appeal to conserve this magnificent area, the Trust purchased the site in 1992. Unlike many ancient woodlands, Brampton Wood has not become 'high forest', due to its history of coppice management and extensive felling (up to two-thirds

of the wood during the 1950s). This management makes the woodland suitable habitat for dormice (Bright, Morris and Mitchell-Jones, 2006).

Dormouse reintroduction to Brampton Wood

The People's Trust for Endangered Species (PTES) co-ordinate the National Dormouse Database (NDD) and National Dormouse Monitoring Programme (NDMP), collecting and analysing data on dormouse populations from across the country. In 1992, a program of dormouse reintroduction was initiated to restore dormice to areas of England from which they had been lost and where natural recolonisation was unlikely (due to the dormouse's poor dispersal abilities). Twenty-four reintroductions have been made (Wembridge et al., 2019) with two-thirds of the sites proving successful in the medium term (Mitchell-Jones and White, 2009; Chanin, 2014).

Before the re-introduction, the dormouse had been extinct in Cambridgeshire since at least 1904. It is thought to have been lost from Brampton Wood due to a previous lack of management, resulting in the loss of early successional trees and shrubs. Brampton

Wood was the location of the first official dormouse reintroduction project in the UK (Mitchell-Jones and White, 2009) with 11 wild-caught and 8 captive-bred dormice being released into the wood in June 1993 (Bright and Morris, 2002). A further 30 captive-bred dormice were also released in summer 1994 to supplement the population. Captive breeding is often used, as we avoid taking dormice from fragile wild populations. It is considered that captive-bred animals are less successful than translocating wild bred animals but more individuals can be released (Bright and Morris, 2002). Dormouse boxes were placed within the wood to monitor the success of the reintroduction and track their dispersal.

Monitoring post reintroduction

Monitoring is essential to ensure that conservation measures are working. Since their release, dormice have been monitored in the wood every year and monitoring was incorporated into the Wildlife Trust's monitoring programme in 2011. The number of boxes, visits and box locations has changed over the years,

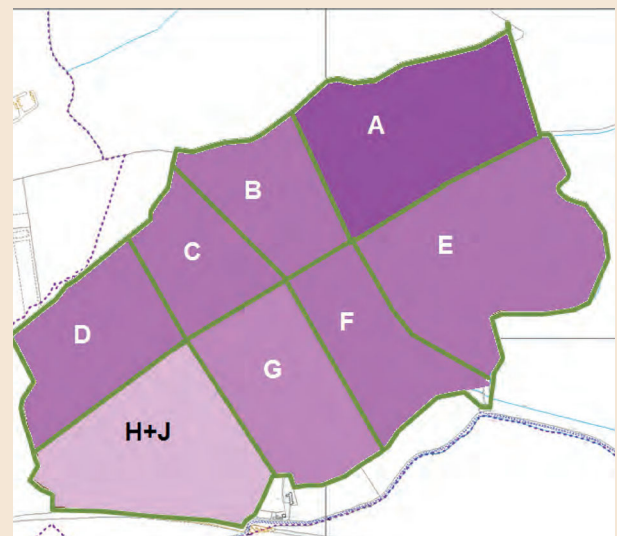
with the initial monitoring just being carried out in the northeast section where the dormice were released. In 2014, the boxes were rearranged to cover the whole wood and several surrounding hedgerows. The aim of this was to determine if dormice had expanded through the wood from the original release site and if they were expanding their range out of the wood.

There are over 300 boxes in the wood, many of which are a special design, which limits the number of birds nesting in the boxes. Volunteers check the nest boxes for nests and dormice every month through the spring and summer. If dormice are found, they are measured and weighed to establish the population dynamics of the species on the site. As this species lives in low population densities and uses natural nest sites as well as boxes, the actual count is considered to be an underestimate. The results of this monitoring have shown that the reintroduction has been a success with dormice spreading throughout the wood by 2007 and beyond the wood by 2016 (Hitchcock, 2019).



Volunteers carefully checking a box for dormice. Boxes provide places for dormice to nest and sleep and also make monitoring of this species easier. Photo © Gwen Hitchcock

The spread of dormice throughout Brampton Wood from their original release site



- Release area
- 2014 dormice found
- 2015 dormice found
- 2016 dormice found

This highlights that there is a successful breeding population in the woodland. (Hitchcock, 2019)

“ The dormouse reintroduction in Brampton wood in 1993 was the first as part of the English Nature Species Recovery Programme. That dormice are still present in the wood and have been shown to be dispersing into the wider countryside is a testament to the ongoing work of the local Wildlife Trust and the many volunteers that have made this project a success. The dormouse reintroduction programme continues and now nearly 1,000 dormice have been reintroduced to 24 sites across midland and northern counties. We know dormouse reintroductions can work because of the ongoing success at Brampton wood. ”

Ian White, Dormouse Officer, People's Trust for Endangered Species

Summary

The results show that the reintroduction of dormice has been successful at Brampton wood. The lessons learnt through this reintroduction program have allowed this species to be successfully reintroduced elsewhere in the UK. The ongoing program of monitoring will allow us to establish the long-term success of dormice in Cambridgeshire and inform further reintroductions across the three counties.

Acknowledgements

Our thanks go to Ian White and Emily Marnham from the People's Trust for Endangered Species for information and data for this case study. We would also like to thank all the dormouse volunteers without whom this project would not be a success.

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