



Wyre Forest Study Group

DORMICE AND CONIFERS IN WYRE FOREST

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Until recent years the Dormouse *Muscardinus avellanarius* has been associated with ancient semi natural woodland with a rich mosaic of trees and shrubs established by traditional coppicing. It was thought that they were very poor at adapting to drastic changes in land management. Most research projects were concentrated on these “ideal” habitats where Dormice were easy to find. They are considered uncommon in Great Britain. It appears that they have become extinct from at least seven counties where there was reported evidence of Dormice by Rope (1885) and thinly distributed in others. Dormice are thought to be scarce in Worcestershire County Red Data Book and are one of the key species adopted by English Nature’s “species recovery programme.”

The “Great Nut Hunt” of 1993 was carried out by many enthusiastic volunteers throughout the country, searching for hazelnuts which had been chewed distinctively by Dormice. The results of this gave valuable information but were, of course, restricted to traditional hazel habitat. It gave just a snapshot of the true distribution of Dormice in Britain. Finding signs of Dormice in other habitats is a difficult task and, in most cases, they are found by complete chance.

It was an unlucky Dormouse who came to grief in Ribbesford wood during verge mowing operations in the late 1980s. Fortunately for future generations he was found by forest workers – their secret was out! This was the first inkling that this cute little rodent may live in the area, as there were no past records to suggest their existence. Due to the level of knowledge at the time it was a great surprise to learn of this discovery.

Most of Ribbesford was clearfelled in the mid 1970s. The area would have been cleared of all broadleaved trees as well as crop trees, leaving a desert-like environment for an arboreal rodent. It was then replanted with a mixture of conifers including Corsican Pine, Scots Pine, Douglas Fir, Larch and Lawson Cypress. So when this unfortunate mouse came to light the crop was at thicket stage. True, the verge edges had a good variety of broadleaved trees mixed within the crop, but these were no older than the conifer crop. In most cases they were not old enough to flower or fruit. There was little ground vegetation or shrub layer and virtually *no Hazel*.

Ribbesford does have the advantage of being part of a much larger ancient woodland (Wyre Forest). Possible donor sites have, however, reduced over the centuries due to de-forestation and road building. It is still quite a large woodland site (over 200ha, including private ownership) and although

most of it is a planted ancient woodland site (PAWS), it still retains relic ancient semi-natural characteristics.

This discovery threw up questions such as:

- ❖ Was this just an unlucky explorer, looking for a better world?
- ❖ Were there more?
- ❖ Could a population actually survive in this “alien” habitat?

After various discussions with English Nature and local ecologists, it was decided in June 1993 to place 30 boxes along the edge of the verge where the Dormouse had been found, as an experiment to assess the extent of any population.

For over a year no signs of Dormice were seen. Incredibly, in October 1994, 7 fresh nests were found in the boxes, with a total of 12 Dormice in residence, including 10 juveniles. This was a fantastic development – not only were there good numbers they were obviously managing to breed successfully!

This further discovery raised even more questions:

- ❖ Where did they colonise from after the “devastation” of clearfelling?
- ❖ What were they feeding on?
- ❖ How far were they travelling to feed?
- ❖ What relationship did the conifers have on their ecology?
- ❖ Could there be other populations in the rest of the woodland?
- ❖ If so, what future management would benefit Dormice in the long term?

To answer any of these questions the project would have to expand and be monitored accurately on a regular basis for many years.

The next step was to divide the woodland into 17 areas and survey each for possible food plants, see

Figure 1. The findings of this survey were, perhaps, not surprising. The edges of the plantations were very similar, having a good variety of broadleaved trees, mainly Oak coppice, Birch, Alder, Rowan and Holly. Further into the crop it became more pure conifer. The stream valleys and hedgerows seemed more typical Dormouse habitat – mature Oak, Birch, Ash, Sycamore with Alder, Hawthorn, Rowan, Cherry, Holly, Crab Apple and an understorey of Hazel. Could these areas be where they colonised from? Bramble, an important food source and safe nesting habitat, was found throughout the site. However, in most cases it was very sparse and due to shading it did not flower or fruit and therefore would be little or no value to Dormice. Honeysuckle, on the other hand, was widespread and abundant, readily available as a good food source and nesting material.

Due to the similarity of most of the woodland the only way to find the extent of any population was to increase the number of boxes and monitor them regularly. In July 1995 a further 270 boxes were erected throughout the woodland. The original site was linked up; most of the boxes were positioned at

approx. 20m intervals around the edges of the ride system in similar habitat to the first discovery, others were placed in more pure conifer areas or in the broadleaved areas of streamside and hedgerow. Since then every box has been checked each month from May to October and the data collected.

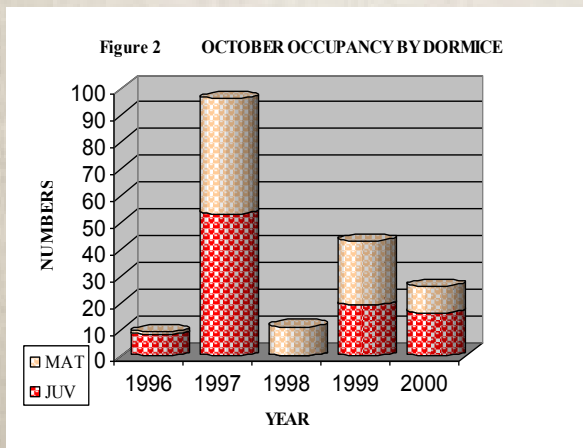
Figure 1 HABITAT SURVEY 1995

SURVEY No.	DESCRIPTION	AL	ASH	BE	BI	CH	C/A	EL	HAW	HAZ	HOL	LI	OAK	ROW	SY	WI	YEW	BIL	BRA	BRO	G/R	GOR	HT	H/S	IVY
1	Original site CP/DF78/79																								
2	Hedgerow boundary SP80																								
3	Grass ride edge DF80 CP79																								
4	Stream valley DF78																								
5	Forest road edge CP79																								
6	Forest road edge CP/DF78																								
7	Forest road edge ASH29																								
8	Stream valley CP/JL74																								
9	Grass ride edge CP/JL74																								
10	Forest road edge CP83/DF72																								
11	Grass ride edge LC60/DF72																								
12	Forest road edge CP60/79DF80																								
13	Grass ride edge CP60/SP80																								
14	Forest road edge CP79/DF68																								
15	Edge of clearfell CP79																								
16	Grass ride edge JL74/DF68																								
17	Grass ride edge JL74/DF68/CP79																								

KEY	CP79	AL	EL	ROW	BRO
NON EXISTENT	CORSICAN PINE - WITH PLANT YEAR	ALDER	ELDER	ROWAN	BROOM
PRESENT- BUT RARE	SP SCOTS PINE	BE BEECH	HAW HAWTHORN	SY SYCAMORE	G/R GUELDER ROSE
COMMON	DF DOUGLAS FIR	BI BIRCH	HAZ HAZEL	WI WILLOW	GOR GORSE
VERY COMMON	JL JAP LARCH	CH CHERRY	HOL HOLLY	BIL BILLBERRY	HT HEATHER
	LC LAWSON CYPRESS	C/A CRAB APPLE	LI LIME	BRA BRAMBLE	H/S HONEYSUCKLE

Dormice have now been found throughout the whole of Ribbesford! Some boxes were used within 2 months of erection – others for the first time this year. Some boxes are used on a regular basis; others have only ever been used once. 42% of boxes have now been used throughout the site at some time, but only 19% in the broadleaf valleys and hedgerows! They *seem* to prefer the mixed broadleaf/conifer edge effect, which is created by the forest track network. Like any small mammal population their numbers have fluctuated over the years, Figure 2.

The October occupancy gives the best indication of



population levels and breeding success because, although Dormice use 2 or 3 different nests in their territory, it gives just a snapshot of their minimum numbers.

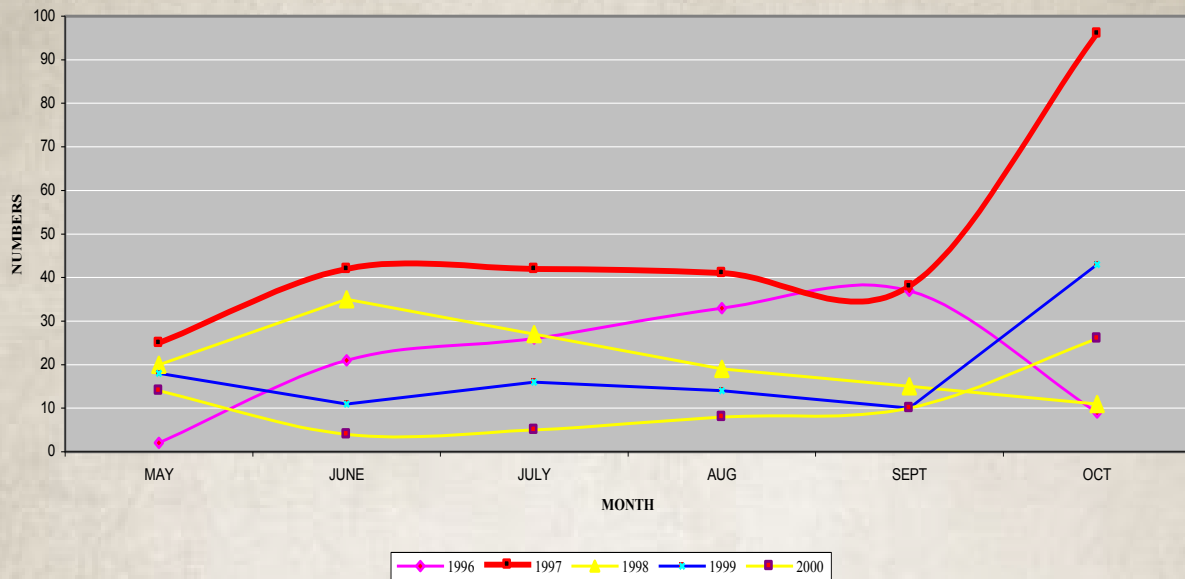
The second full year of box inspections (1997)

seemed to show a sudden increase in the population. Could providing nest boxes be a vital link to their breeding success? Since 1997 the numbers have fluctuated but have not reached the same exciting levels of 1997, Figure 3.

The last three years' figures have been disappointing. The reasons for this are unclear. The habitat hasn't changed on the face of it. Certainly some of the boxes have been disturbed and the Dormice may have deserted, but the population seemed to reduce throughout the study area, which points to a larger problem. Or was it just a natural fluctuation, which happens throughout the small mammal world? Five years is not long for this type of project and only trends can be seen at this stage. It will take many more years of study to be sure of population dynamics and sustainability. By that stage, hopefully, we will have learned how best to manage this type of environment for their future survival.

There is no doubt that over the years their range and numbers have decreased due to many factors, including fragmentation of habitat - loss of linking hedgerows, road building and changes in forest management. Other factors, such as climate, we can do little about. The warm wet winters of recent years are not conducive for any hibernating creatures and the cool wet springs are not ideal for an animal that needs to feed up quickly to reach breeding condition. Dormice require a constant supply of food for the five months of activity and this is the main question to be answered in Ribbesford – what are they feeding on?

Figure 3 DORMICE IN BOXES BY MONTH



Certainly conifers create a warm, safe environment for nesting (although not providing natural nest sites) and the many horizontal-interconnecting branches create a wonderful arboreal motorway system. There is little in the way of flowers, fruit or nuts in this habitat. Conifers do, however, support a high biomass and variety of insects throughout the year. This *seems* to indicate how Dormice are surviving so well.

This signals the next development of the research project. During this year the Forestry Commission Research Dept. have set up a project looking at ancient replanted woodlands throughout the country to try to find the extent of Dormice populations in conifer plantations. In most cases this will involve the erecting and monitoring of nest boxes. However, due to good historical data, Ribbesford and a site in Dorset have been picked for a more detailed study:

- ❖ Droppings will be analysed to give an idea of their diet throughout the year.
- ❖ Radio tracking or micro chipping will take place to find out how far and where they travel to feed.
- ❖ Fur clipping has been introduced to identify individuals, to find out movement within territories or any population expansion.
- ❖ A further 100 boxes will be erected in an area that has been recently thinned to find out whether Dormice are present or if/ when they move in.

In the seven years that I have been involved in Dormouse research I have spoken to many people throughout the country. I have come to realise that Dormice are not, perhaps, as rare as was first thought. In many cases it seems that they have just been under-recorded because of their complex

ecology and the difficulty in finding evidence of their existence in less desirable habitats. In recent years Dormice have been “discovered” in a wide range of habitats, including Blackthorn scrub (Dorset); mature Oak stands with no understorey (Devon – in Pied Flycatcher nest boxes); wetland sites - *Luzula* (various locations), pure Beech woods (Wales), mixed conifer woodland (Northumberland), Willow carr / Reed beds (Isle of Wight), *Phragmites* swamp (Carmarthen) and pure conifer plantations (Shropshire). One mouse was even found curled up fast asleep in a lady’s make up bag in her bedroom! It was assumed that it had gained access via an open window one cold spring morning. The lady’s garden was well manicured and there was no obvious “good” habitat near by! (Turtle – personal comment, 2000).

Despite these “new” findings Dormice should still be considered rare and must remain protected due to their fragile existence in certain habitats and their susceptibility to further decline.

These records do, however, suggest that perhaps Dormice are far more adaptable to certain habitats than was originally thought. People throughout the country are becoming far more aware and enthusiasm is increasing to find answers. When Richard Ferris, who is heading the Forestry Commission project, sent out his original questionnaire to find out the extent of records and interest, he was amazed at the response he received. So many of us work in isolation and don’t always have access to the bigger picture. Dialogue has now increased throughout the country and if it continues it can only benefit the future of one of our most endearing native mammals.

These are exciting times and in the next few years maybe, just maybe, more Dormice secrets will be uncovered!



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Other Dormice Records in Wyre Forest

Historically Dormice have been considered quite common in parts of the forest, especially along Dowles Brook and the old railwayline. Most records consist of accidental discoveries (Hickin 1971) and as far as I am aware, until recently, no formal recording or monitoring has taken place to discover the extent or viability of the population.

In 1995, 30 nest boxes were erected along the Dowles Brook to the west of Rudds Bridge. This seemed like good habitat, with a mixture of broadleaved trees and shrubs. Dormice have been found in two areas within this site, but their numbers are few. Although juveniles were present to show breeding success, no signs have been found since May 1998.

Also in 1995, 13 nest boxes were erected in a thick conifer plantation to the north of Dowles Brook. This was after the discovery of a chewed hazelnut nearby (Jeff Hubble). Due to the proximity of the public to the exact spot, the boxes were put up as an experiment about 200m away in a mixture of Douglas Fir and Scots Pine (planted in 1965/1968 respectively). This habitat was similar to Ribbesford except that it was isolated and had only a few stands of small oak coppice within the crop. Four years later a juvenile was discovered in one of the boxes and since then has been regularly used. In fact, in October this year, a mature female and two juveniles were found in the same box! A big male has used one other box, about 100m from the first but only once, in October 1999, prior to hibernation.

In 1997, 35 nest boxes were erected around Park

House. This habitat looked ideal, with mature oak and a hazel understorey. Dormice had been found in this area in the past (Mike Taylor – personal notes), but the size of the population was unknown. Just two Dormice have used the boxes since 1997 and none have been found since June 1999!

Dormice are protected under schedule 5 of the Wildlife & Countryside Act 1981 and schedule 2 of the Conservation (National Habitats) Regulations 1994. Among other things this makes it an illegal to:

- ❖ Intentionally or deliberately kill, injure or capture Dormice.
- ❖ Deliberately disturb Dormice (whether in a nest or not).

One of the problems with any Dormouse project involving boxes is that they are put on the trees at about waist height. They are therefore very easy to find, and disturbance has certainly been a factor in some poor returns. The site along Dowles Brook was adopted by a local school as their bird box project! About half of the boxes in Ribbesford were turned around on the tree after some misguided person thought they had been put on the wrong way around for the birds! A downhill mountain bike course was created alongside one row of boxes and no mice have been seen there since! Humans are inquisitive, by their very nature, but any further disturbance of these boxes is not acceptable – and against the law! A licence from English Nature is required to inspect Dormice boxes, so please resist the temptation to lift the lid of any box “just for a peep” specially those at chest height with the hole at the back!