

Wyre Forest Study Group

Dormice and Conifers in the Wyre Forest - 2021 update

PHIL RUDLIN



Ribbesford Woods

Another strange year goes by with both the weather and Covid-19 affecting wildlife and humans alike! With a cold, wet spring many species struggled during some of the most important months of the year. Unfortunately, it seems, that dormice were among them.

Aims, methods and locations

The aim of the research project, which began in 2000 in a 17ha area of Ribbesford (Fig.1), was to find the best method of reverting coniferous plantations back to native broadleaves, while maintaining Dormouse populations. Four treatment types were used and compared:

Treatment 1: Hand cut with chainsaws and forwarder extraction in autumn / winter. Small areas of conifers were felled (approx 20mx20m) to create small glades within the crop. The idea being that these would regenerate naturally in years to come and would provide viable habitat for Dormice by the time of the next operations in 5 years time. Work was carried out during autumn / winter of 2003/04 (this area was combined with Treatment 2 in 2009/10 as finding chainsaw operators to fell trees proved impossible!)

Half of this area was clearfelled in 2015/16 with the remaining conifers removed in October 2020.

Treatment 2: Harvester operation with forwarder extraction – autumn / winter method as for Treatment 1. Work was carried out during autumn winter of 2003/04, 2009/10 and half of this area clearfelled in 2015/16 with the remaining conifers removed in October 2020.

Treatment 3: Harvester operation with forwarder extraction in autumn / winter. Normal thinning operation removing 30-35% according to standard thinning tables. Work was carried out during autumn / winter of 2003/04, 2009/10, 2015/16 and remaining conifers removed in October 2020.

Treatment 4: Harvester operation with forwarder extraction in autumn / winter. Two larger areas of conifers were felled during each operation (approx. 0.3ha). This replicates the normal coppice size in broadleaf habitat, which Dormice favour. Again, this should regenerate naturally in years to come and would provide viable habitat for Dormice by the time of the next operations in 5 years time. Work was carried out during autumn / winter of 2003/04, 2009/10, 2015/16 and remaining conifers removed in October 2020.

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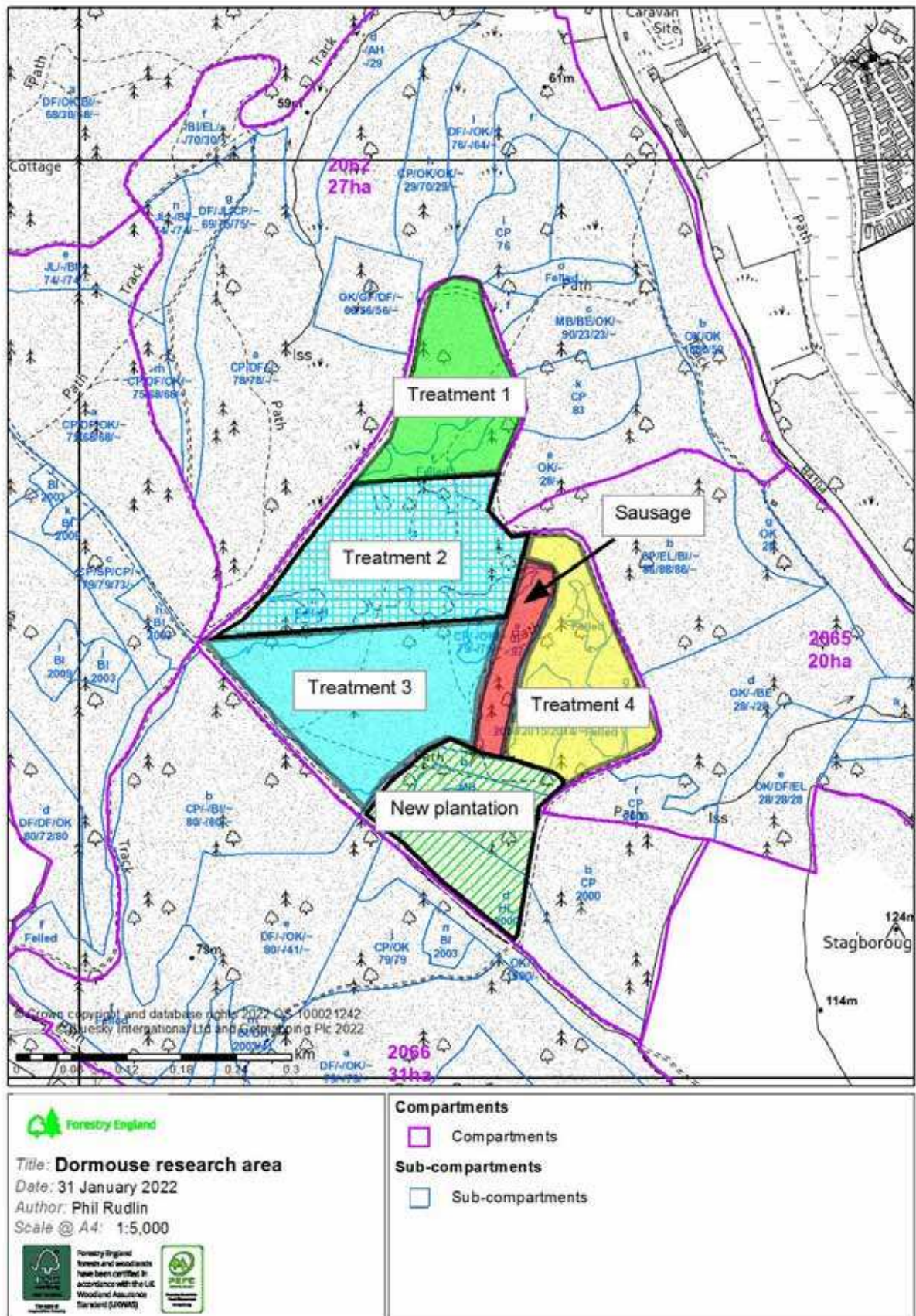


Figure 1: Location of treatment areas within Ribbesford Woods

Sausage: Area of failed Corsican Pine which has good structure, with Oak, Birch and Bramble. So named as it resembles a sausage shape on the map! 20 boxes erected in 2002.

New Plantation: Area planted with Corsican Pine and European Larch in 2000. 40 boxes erected in 2004

Unthinned area: Area adjacent to research site, on other side of forest track. 15 boxes erected in 1993 and a further 20 in 2005

Survey results - 2021

Dormice have been monitored in Ribbesford Wood for 28 years and research into habitat management in a conifer plantation has continued for 21 years. For the last 18 years 380 Dormice boxes have been inspected monthly and their occupants recorded. The first of six checks, at monthly intervals, was carried out in May and only two animals were found. This is the lowest number since we began comparable recording in 2004. The following months didn't improve dramatically although finding 19 in August was encouraging; this included 12 youngsters, showing they were at least breeding. Over the season, 53 animals were found which is the 4th lowest (Table 1).

Twenty-one young were found during the season, which is the 7th lowest on record (Table 2). It is worth noting that these were the total numbers of juveniles found in boxes and not individuals. Of those found, 10 Juveniles were micro-chipped but some were too small to chip, so may or may not have been found again. (Seven young were found which were 7g or less and therefore could not be chipped, four were found again after chipping).

Fourteen fresh nests were found in boxes that were not occupied during the survey season. It is not unusual to find empty nests as they have up to five different nests within their home range and we only check them six times a year. However, it is interesting to know they are present. Table 1 shows this is the equal 5th lowest number of unoccupied nests found over 18 years.

Just 14 animals were big enough to micro-chip - 4 adults and 10 juveniles (Table 3). The adults were either yearlings, born the year before, or possibly older. However, it is impossible to age without permanent marking, such as micro-chipping.

Although 53 animals were found, we know from micro-chipping that some of these were found on multiple occasions. By identifying individuals, we know there were at least 25 different dormice in the area. This figure is worked out from the individuals chipped during the year or recaptured from previous years. It includes juveniles which were big enough to chip, but not those which were too small to chip, as they may have been found again later in the year and chipped, therefore duplicating results. This equals the 3rd lowest since 2004 (Table 4).

Eleven animals were recaptured from previous years (Table 5). It has been interesting to see the trend over the last 18 years. Figure 1 shows the number of captures each year, showing some significant variations, whereas the actual individuals confirmed is more constant, this is more accurate and therefore more useful information. It shows the importance of micro-chipping, which is the only way of following animals with any degree of certainty over a long period of time.

Dormice have been micro-chipped for 20 years (first animal chipped in July 2002) and therefore some individuals have been followed for a number of years. Of the 11 recaptures this year, 6 were over a year old, the oldest of which was 4, chipped as a juvenile in October 2017 (Table 6). One of these individuals was found on 4 visits, 5 on 3 visits, 2 on 2 visits and 3 just once. These 11 animals were therefore seen on 26 occasions and could have been recorded as individuals were it not for micro-chipping.

Conclusion

After an almost record season in 2020 it was quite a shock to find so few animals in the research area of Ribbesford in 2021. During the final phase of the project all the conifers were felled from 7.3ha of the 17ha site (43%) in the autumn of 2020. The remaining 57% was left completely undisturbed. The areas felled were also mature conifer with little structure, poor connections in the canopy or ground vegetation so unlikely to be suitable for dormice. Our records showed that animals were only found on the margins of these areas which were still connected to favourable habitat so, when the trees were felled, they were highly unlikely to be disturbed or killed. It is much more likely that many of the animals just didn't survive the winter. For any hibernating creatures wet, warm winters are not conducive to survival. Small mammal populations also have a habit of crashing sometimes depending on environmental conditions and food supply. Dormice are less susceptible to this as they conserve energy during hibernation and during spells of poor weather/food and therefore live longer. However, we have found, in some years they seem to struggle. For instance, 2012 was a particular wet summer and the dormice showed little signs of breeding. However, over the next few years numbers gradually increased and have been fairly stable until now. Hopefully they will bounce back in 2022!

In February 2021, 4000 trees were planted in the research area. The majority of the areas were planted up with Oak. However, a mixture of Rowen, Crab Apple, Hazel, Wild Cherry, Field Maple and Hawthorn have also been planted, particularly around the edges to improve the diversity in the future. Unfortunately, we ran out of trees before this was completed so three of the smaller areas will be planted in late winter of 2022.

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Acknowledgements

I would like to thank Roger Trout, Andy Bucklitch and Charline Hue again for their continued effort and support in monitoring and micro chipping, over the

last 21, 10 and 7 years respectively. Without them it would be extremely difficult to maintain this level of monitoring, which will continue for the foreseeable future.

Table 1. Records of Dormice and nests in Ribbesford Woods 2004-2021.

	2004		2005		2006		2007		2008		2009	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April							3	0				
May	6	2	12	2	15	3	20	3	5	2	10	1
June	11	0	14	2	11	8	16	0	9	11	9	1
July	19	0	17	5	6	4	8	2	11	1	4	5
August	13	1	8	0	4	1	7	4	16	8	8	0
September	19	0	8	4	10	3	8	0	8	6	8	3
October	28	9	4	16	18	8	2	0	18	2	1	1
November	*	*	*	*	*	*	*	*	*	*	*	*
Totals	96	12	63	29	64	27	64	9	67	30	40	11

	2010		2011		2012		2013		2014		2015	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April												
May	7	2	16	0	4	2	5	4	5	1	17	1
June	11	6	4	0	6	0	7	1	10	5	21	3
July	9	8	5	9	5	3	2	3	12	2	17	6
August	28	7	5	1	4	3	5	7	14	2	8	0
September	20	8	8	2	9	2	*	*	26	2	26	7
October	30	6	4	7	4	2	19	3	18	4	26	5
November	*	*	*	*	*	*	1	0	*	*	*	*
Totals	105	37	42	19	32	12	39	18	85	16	115	22

	2016		2017		2018		2019		2020		2021	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April												
May	12	11	9	10	12	4	11	3	19	10	2	1
June	13	3	16	2	9	5	18	6	14	8	9	0
July	34	0	24	3	12	9	22	8	16	7	8	6
August	19	2	35	9	17	1	28	8	35	3	19	3
September	14	2	26	5	18	1	21	8	25	4	13	4
October	7	3	23	9	6	11	19	0	16	5	2	0
November	*	*	*	*	*	*	*	*	*	*	*	*
Totals	99	21	133	38	74	31	119	33	125	37	53	14

Table 2. Juvenile Dormouse records in Ribbesford Woods 2004-2021.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Juveniles	34	11	22	10	34	6	35	5	7

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Juveniles	17	26	32	47	65	31	53	51	21

Table 3. Number of micro-chipped Dormouse in Ribbesford Woods 2004-2021.

Treatment No	No of Dormice chipped in 2004	No of Dormice chipped in 2005	No of Dormice chipped in 2006	No of Dormice chipped in 2007	No of Dormice chipped in 2008	No of Dormice chipped in 2009	No of Dormice chipped in 2010	No of Dormice chipped in 2011	No of Dormice chipped in 2012
1	4	0	3	1	0	2	8	0	1
2	7	4	12	5	11	2	2	4	0
3	13	3	9	4	2	3	4	2	2
4	8	3	0	0	2	2	4	3	7
Sausage	3	0	0	1	2	0	1	1	2
New plantation	Not surveyed	3	1	0	4	1	19	3	4
Unthinned area	0	0	0	0	3	1	1	0	0
Total	35	13	25	11	24	11	39	13	16

Treatment No	No of Dormice chipped in 2013	No of Dormice chipped in 2014	No of Dormice chipped in 2015	No of Dormice chipped in 2016	No of Dormice chipped in 2017	No of Dormice chipped in 2018	No of Dormice chipped in 2019	No of Dormice chipped in 2020	No of Dormice chipped in 2021
1	1	5	0	1	6	1	3	5	7
2	5	3	6	12	11	7	3	7	0
3	1	1	0	1	0	1	2	1	0
4	5	3	9	1	12	2	15	9	2
Sausage	6	3	5	3	4	0	3	0	1
New plantation	4	15	4	12	15	13	13	12	4
Unthinned area	0	0	0	0	0	0	0	0	0
Total	22	30	24	30	48	24	39	34	14

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Table 4. Number of individual Dormice in Ribbesford Woods 2004-2021.

Treatment No	No of individual Dormice found 2004	No of individual Dormice found 2005	No of individual Dormice found 2006	No of individual Dormice found 2007	No of individual Dormice found 2008	No of individual Dormice found 2009	No of individual Dormice found 2010	No of individual Dormice found 2011	No of individual Dormice found 2012
1	4	1	3	4	3	3	9	4	1
2	9	9	14	11	13	3	5	9	1
3	16	10	13	9	4	11	5	0	3
4	9	4	3	1	4	2	6	3	11
Sausage	3	0	2	1	2	0	2	2	1
New plantation	Not surveyed	3	1	0	4	1	26	7	4
Unthinned area	0	0	1	2	3	2	2	1	1
Total	41	27	37	28	33	22	55	26	22

Treatment No	No of individual Dormice found 2013	No of individual Dormice found 2014	No of individual Dormice found 2015	No of individual Dormice found 2016	No of individual Dormice found 2017	No of individual Dormice found 2018	No of individual Dormice found 2019	No of individual Dormice found 2020	No of individual Dormice found 2021
1	1	6	2	1	7	1	4	5	2
2	7	4	9	15	14	8	6	10	6
3	1	1	4	2	1	2	3	2	0
4	11	6	13	3	14	9	22	16	4
Sausage	6	6	6	8	4	4	4	2	3
New plantation	6	19	14	19	21	18	17	19	10
Unthinned area	0	0	0	0	0	0	0	0	
Total	32	42	48	48	61	42	56	54	25

Table 5. Number of Dormice recaptured in Ribbesford Woods 2004-2021.

Treatment No	Dormice found 2005	Re captures from previous years	Dormice found 2006	Re captures from previous years	Dormice found 2007	Re captures from previous years	Dormice found 2008	Re captures from previous years	Dormice found 2009	Re captures from previous years	Dormice found 2010	Re captures from previous years
1	4	1	4	1	9	2	1	1	3	0	19	1
2	23	4	28	9	20	7	36	6	12	3	13	3
3	26	5	28	10	21	12	11	3	17	7	8	1
4	6	1	2	2	2	1	4	2	5	1	11	2
Sausage	0	0	0	0	5	0	10	0	0	0	2	1
New Plantation	4	*	2	1	7	0	5	1	1	0	50	7
Unthinned area	0	0	1	0	2	0	3	0	2	1	2	1
Total	63	11	65	23	66	22	70	13	40	12	105	16

Treatment No	Dormice found 2011	Re captures from previous years	Dormice found 2012	Re captures from previous years	Dormice found 2013	Re captures from previous years	Dormice found 2014	Re captures from previous years	Dormice found 2015	Re captures from previous years	Dormice found 2016	Re captures from previous years
1	7	3	1	0	1	0	15	1	4	2	1	0
2	14	2	2	0	8	3	4	1	26	3	38	3
3	0	0	3	2	1	0	1	0	6	4	2	1
4	3	0	18	3	14	5	19	1	35	4	14	3
Sausage	6	2	3	0	7	0	15	4	1	1	13	4
New Plantation	10	5	4	0	8	1	31	3	43	9	31	7
Unthinned area	2	1	1	1	0	0	0	0	0	0	0	0
Total	42	13	32	6	39	9	85	10	115	23	99	18

Treatment No	Dormice found 2017	Re captures from previous years	Dormice found 2018	Re captures from previous years	Dormice found 2019	Re captures from previous years	Dormice found 2020	Re captures from previous years	Dormice found 2021	Re captures from previous years
1	14	1	1	0	14	1	7	1	3	0
2	25	3	12	1	9	3	17	3	8	1
3	2	1	2	1	11	0	5	1	0	0
4	41	2	15	8	32	4	33	5	11	1
Sausage	13	0	5	2	10	2	18	2	7	3
New Plantation	38	6	39	4	43	5	45	8	24	6
Unthinned area	0	0	0	0	0	0	0	0	0	0
Total	133	13	74	16	119	15	125	20	53	11

* Not surveyed prior to 2005

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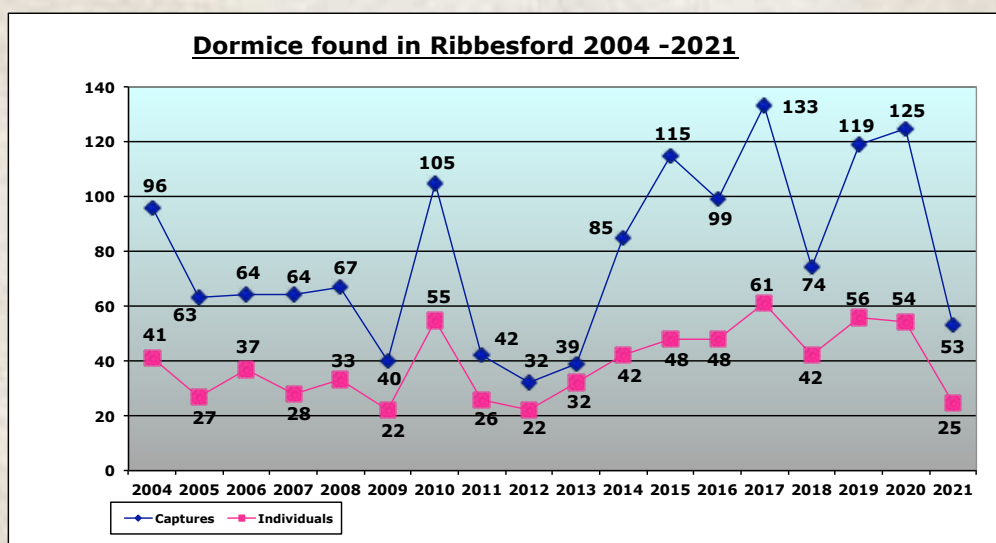


Figure 2. Dormice found in Ribbesford Woods 2004-2021.

Table 6. Captures of micro-chipped Dormice in Ribbesford Woods 2021.

Micro-Chip number	Date micro-chipped	Age when micro-chipped	Sex	Number of boxes used after being chipped	Number of recaptures after being chipped	Number of captures in 2021	Approx age in 2021
319269	Oct-17	Juv	Male	6	11	3	4
905627	Aug-18	Juv	Female	9	12	2	3
747038	Aug-19	Mat	Female	5	7	3	3
747180	Aug-19	Juv	Male	9	11	3	2
715234	Jul-20	Mat	Male	2	2	1	2
747261	Oct-19	Juv	Female	6	8	3	2

Wyre Forest records

There are five Dormice box schemes in Wyre Forest that have been checked regularly between May and October since 2013 (Table 7).

A small plantation of 18-year-old Scots Pine on Longdon Orchard is now an established Dormouse site with 30 boxes and records for the 9th year. One adult was found in May and one in June, but none found in the remaining months. It was disappointing not to find any animals later in the year or any signs of breeding. However, this is a relatively small, 2ha plantation surrounded by mature conifer plantations and is probably only supporting a small population.

Thirty-five Dormice boxes have been placed around Park House since 1997. Records have been few and far between. However, over the last 6 years a small number have been found in Hazel coppice beneath mature Oaks, established using temporary fencing to keep the deer out. However, no signs of Dormice were found in 2021.

A small scheme of 10 boxes was erected on Wimperhill in July 2013 in a fenced area adjacent to an historical site. A quarter of an area of Douglas Fir plantation was clear felled in 2006 and the site fenced to allow

natural regeneration to establish. It is now a tangled web of Birch, Oak, Douglas Fir, Bramble, Heather, Honeysuckle, etc. No signs of Dormice were found on this site between May 2003 and October 2016. Unfortunately, no signs were found in 2021. Six more boxes were put up in an adjacent area, felled in 2011, in April 2021, but no evidence of Dormice yet.

Thirty boxes were checked in a 22-year-old Corsican Pine plantation at Button Oak. Two adults were found in May, four in June, one in July, two in September and one juvenile in October, which suggested breeding.

The only other established site in Wyre Forest itself is towards the western end of Dowles Brook, recorded by David and Brenda Rea. Twenty Dormice boxes were checked in June and October. This has been a frustrating site over the years as there seems to be a small population present, but difficult to find. Unfortunately, no evidence of Dormice was found in 2021, with the last record being a female with 6 young in October 2018.

Conclusion

2021 has also been a poor year in the Wyre Forest itself with only one site showing any significant records or signs of breeding. This is, however in line with records

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from Ribbesford and in the wider country. I suspect Dormice are widespread but in such low densities that finding them with any certainty is extremely difficult.

On a positive note, one Dormouse nest was found on Longdon Orchard. In June 2015 Nigel Woodall found a Dormouse wandering through the grass and fortunately took a photo of it. Although we had no records nearby, there was a small coppice coupe, which had been fenced off about 12 years previously, that looked like decent habitat. In April 2016 six boxes were put up in

this area. They were checked in May & October for the following five years with no evidence of any Dormice. When checked in October 2021 the first four boxes were in a very poor state and were considered for removal as, after 5 years the literature say it is highly unlikely Dormice are present if no evidence has been found after this time. Of course, almost the last box proved how little we can rely on books when a fairly fresh Dormouse nest was found. The boxes will be replaced now, ready for 2022 and beyond!

Table 7. Records of Dormice and nests in Wyre 2021.

	Button Oak		Longdon Orchard		Wimperhill		Parkhouse		Betts Reserve	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
2013	10	1	3	3	0	0	1	0	0	0
2014	11	4	3	2	0	0	0	1	4	0
2015	10	2	9	3	0	0	1	1	0	1
2016	18	1	2	1	2	2	2	0	1	0
2017	11	2	10	3	1	1	2	1	2	2
2018	27	2	18	2	6	0	3	2	8	3
2019	17	1	8	5	1	1	4	2	0	3
2020	8	1	6	4	0	0	3	0	0	2
2021	10	3	2	0	0	0	0	0	0	0



Dormouse found in grass, June 2015

Nigel Woodall



Dormouse nest in box, October 2021

Phil Rudlin



Dormouse box with empty nest, October 2021

Phil Rudlin



Trees planted in Ribbesford research area, April 2021

Phil Rudlin