Dormice and Conifers in Wyre Forest 2020 - Update

PHIL RUDLIN

Dormouse - torpid Phil Rudlin

2020 has been a rather strange year to say the least! With Covid-19 restrictions in place for much of the surveying season it proved difficult to cover the monthly Dormice box inspections in Ribbesford from May to October. However, we were fortunate that Roger Trout was contracted to carry out six visits to the site each year to survey and micro-chip. As he couldn't carry out this work from home, he was able to continue this valuable work. Unfortunately, I was furloughed for May so could not help, so it wasn't until June onwards that we were able to carry out full inspections.

We have now been monitoring Dormice in Ribbesford Woods for 27 years and carrying out research into habitat management in a conifer plantation for 19 years. For the last 17 years 380 Dormice boxes have been inspected monthly and their occupants recorded. Although about 50 boxes in an area with few records of Dormice weren't checked in May, it was very encouraging that Roger found 19 animals which was the second-best start to any season, just pipped in 2007 when 20 were found. The following monthly inspections were also very encouraging, peaking in September with 25. Over the whole season 125 animals were found which is the second highest since equivalent records began in 2004 (Table 1).

Fifty-one young were found during the season, which is the third highest recorded (Table 2). It is worth noting that these were the total numbers of juveniles found in boxes and not individuals. Of those found 24 Juveniles were micro-chipped, but some were too small to chip so may, or may not, have been found again, (19 young were found which were 7g or less and therefore could not be chipped, eight were found again after chipping).

Thirty-seven fresh nests were found in boxes that were not occupied during the survey season. It is not unusual to find empty nests as dormice have up to five different nests within their home range and we only check them six times year. However, it is always interesting to know they are present. Table 1 shows this is the second equal highest number of unoccupied nests found over 17 years.

A total of 34 animals were big enough to micro-chip - 10 adults and 24 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 125 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 54 different Dormice in the area. This figure is calculated 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 is fourth highest since 2004 (Table 4).

Twenty animals were recaptured from previous years. (Table 5), it has been interesting to see the trend over the last 17 years. Table 1 shows the number of captures each year, showing some significant variations, whereas the actual individuals confirmed is more constant. This is far more accurate and therefore 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.

We have now been micro-chipping for 19 years (first animal chipped in July 2002) and have therefore followed some individuals for a number of years. Of the 20 recaptures this year, eight were over a year old, the oldest of which was five, chipped as an adult in July 2016. This Male was therefore likely to have been born in 2015. (Table 6), two of these individuals were found on all six visits, two on four visits, two on two visits and two just once. These eight animals were therefore seen on 26 occasions and could have been recorded as individuals were it not for micro-chipping.

It has also shown how finding animals in boxes varies so much. One female (75426) was chipped as an adult in June 2017. She was seen again twice that year and twice in 2018 but not recorded in 2019. However, she was found once this year in a box close to where she was chipped. She has been found on eight occasions out of 22 inspections following micro-chipping in just four different boxes. In contrast, a male (319220) was chipped as a juvenile in July 2017 and found in 17 of the 21 following inspections, including all six in 2020, using

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Table 1. Number of dormice and dormice nests recorded 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	
	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
June	13	3	16	2	9	5	18	6	14	8
July	34	0	24	3	12	9	22	8	16	7
August	19	2	35	9	17	1	28	8	35	3
September	14	2	26	5	18	1	21	8	25	4
October	7	3	23	9	6	11	19	0	16	5
November	*	*	*	*	*	*	*	*	*	*
Totals	99	21	133	38	74	31	119	33	125	37

* Not Surveyed

Table 2. Number of juvenile dormice recorded in Ribbesford Woods 2004 - 2020

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Juveniles	34	11	22	10	34	6	35	5	7	17	26	32	47	65	31	53	51

12 different boxes. The oldest animal (16848) has been found eight times out of the 27 following inspections after his chipping in July 2016, using seven different boxes. This shows how difficult it can be to monitor populations with any degree of accuracy without micro-chipping.

Research aim, treatment methods and areas:

The aim of the research project, which began in 2000 in a 17ha area of Ribbesford, was to find the best method of reverting coniferous plantations back to native broadleaves, while maintaining Dormice 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 provide viable habitat for Dormice by the time of the next operations in five years. 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 this area was clear-felled in 2015/16 with the remaining conifers removed in October 2020.

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Table 3. Number of dormice microchipped, by treatment type, Ribbesford Woods 2004 - 2020

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
1	1	5	0	1	6	1	3	5
2	5	3	6	12	11	7	3	7
3	1	1	0	1	0	1	2	1
4	5	3	9	1	12	2	15	9
Sausage	6	3	5	3	4	0	3	0
New plantation	4	15	4	12	15	13	13	12
Unthinned area	0	0	0	0	0	0	0	0
Total	**22**	**30**	**24**	**30**	**48**	**24**	**39**	**34**

Table 4. Number of dormice found, by treatment type, Ribbesford Woods 2004 - 2020

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
1	1	6	2	1	7	1	4	5
2	7	4	9	15	14	8	6	10
3	1	1	4	2	1	2	3	2
4	11	6	13	3	14	9	22	16
Sausage	6	6	6	8	4	4	4	2
New plantation	6	19	14	19	21	18	17	19
Unthinned area	0	0	0	0	0	0	0	0
Total	**32**	**42**	**48**	**48**	**61**	**42**	**56**	**54**

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Table 5. Number of dormice recaptures, by treatment type, Ribbesford Woods 2004 - 2020 (Not surveyed prior to 2005)

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
1	14	1	1	0	14	1	7	1
2	25	3	12	1	9	3	17	3
3	2	1	2	1	11	0	5	1
4	41	2	15	8	32	4	33	5
Sausage	13	0	5	2	10	2	18	2
New Plantation	38	6	39	4	43	5	45	8
Unthinned area	0	0	0	0	0	0	0	0
Total	133	13	74	16	119	15	125	20

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

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 were 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 the other side of forest track. 15 boxes erected in 1993 and a further 20 in 2005

Discussion:

Despite Covid-19 restrictions we were fortunate to get an almost complete survey carried out in Ribbesford. This was particularly important this year as the week after carrying out our final inspections in October the harvesters moved in and clear-felled all the remaining conifers from the research area. This was the final phase of the reversion process. It was therefore important to record, as accurately as possible, the Dormice in the area prior to felling. The work was carried out in the autumn as the Dormice are still active at this time of the year and would be able to move away from the felling. Our records showed that very few animals were using the conifers at this stage. Planted in 1979 the Corsican Pine plantation would be considered poor habitat for dormice with little ground vegetation, scrub and poor connections in the canopy. The work carried out in the area over the previous three operations has created some good, well connected habitat which the Dormice favour. During the final survey all boxes within the

Table 6. Record of micro-chipped dormice, Ribbesford Woods 2004 - 2020

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 2020	Approx age in 2020
16848	Jul-16	Mat	Male	7	8	1	5
75183	Jun-17	Mat	Female	7	15	4	4
75426	Jun-17	Mat	Female	4	5	1	4
319220	Jul-17	Juv	Male	12	17	6	3
319269	Oct-17	Juv	Male	5	8	6	3
789680	Sep-18	Juv	Female	3	6	2	2
905621	Jun-18	Mat	Female	5	4	2	3
905627	Aug-18	Juv	Female	9	10	4	2

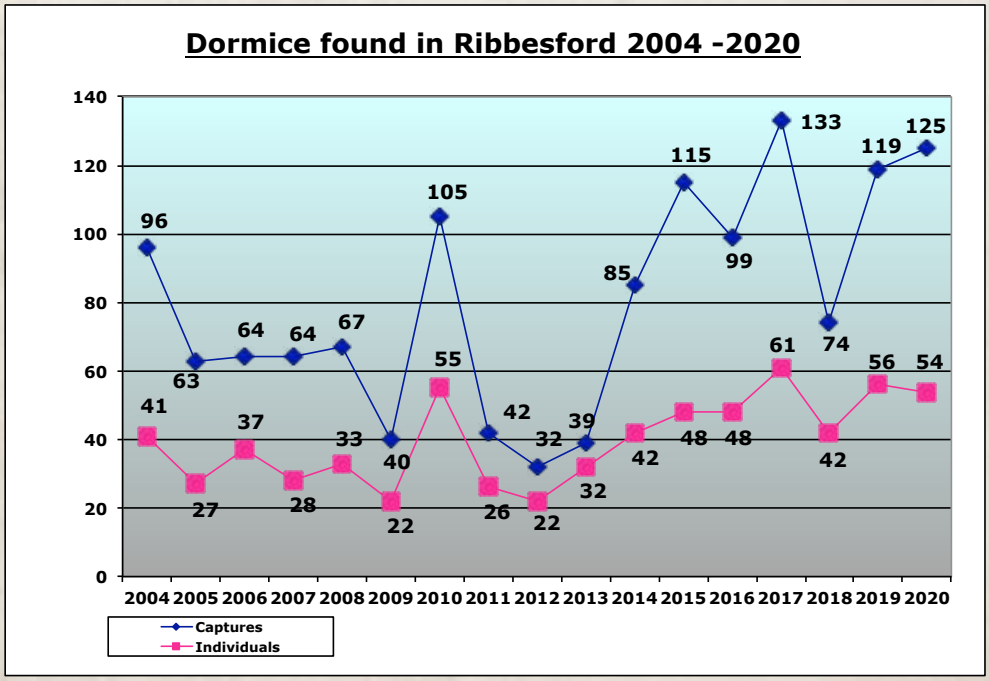

Figure 1. Dormice found in Ribbesford Woods 2004 - 2020

felling areas were removed. Some boxes had nests in and a few, along the margins, had animals in residence. Boxes with nests in were moved to the nearest tree which would not be disturbed and occupied boxes left until the following day when the animals had moved out and the box then moved. Shortly after the felling was completed a mulching machine cleared the site of all the brash (conifer branches). This is unusual and could be an alarming operation with Dormice moving into hibernation just below ground level. However, using previous years records we were able to avoid any areas where Dormice had been found in recent years. It was also important that the work followed quickly after the felling before the Dormice went into hibernation. We would also expect the Dormice to move away so, hopefully, all survived!

The felling map (Figure 2) shows the 7.3ha cleared from the 17ha site which is 43% of the total area. However, Treatments 1 and 2 had most of the conifers removed during the previous operations. Treatment 4 also only had two small areas of conifer remaining. Therefore Treatment 3 was the only site to be felled over its entire area. Approximately 4.5ha was actually worked which is 26.5% of the area. The remaining 73.5%, unshaded on the map, was left undisturbed.

Removing the brash was important to allow the site to be planted up with native broadleaves, mostly Oak with a mixture of minor species. Clearing the brash from the site makes planting and future management much easier, not to mention checking the boxes. All boxes will be returned to the site over the next few years. It is highly unlikely that Dormice will move into these areas for some time as there is no ground vegetation or connections to existing habitat. However, we will continue to monitor the site to find out when it becomes viable. Boxes are put up approximately 25m

apart in a grid pattern across the site. In the past we have used 6ft posts as substitutes for trees until they have grown big enough for a box. With such large areas cleared on this final occasion we expected to use a lot of posts. However, it was surprising how many broadleaves remained after felling and only four posts were required to fill the gaps. The lines are not always very straight or boxes evenly spaced but far better to put on a tree rather than a post!

The planting of the trees in February 2021 will be the final operation in the research site for some time. Therefore, it will be very interesting to see how it develops as we continue to monitor Dormice for the foreseeable future.

I would particularly like to thank Roger Trout this year for his valiant efforts during very tricky times. Also, thanks must go to our regular volunteers, Andy Bucklitch and Charline Hue for helping out whenever they could.

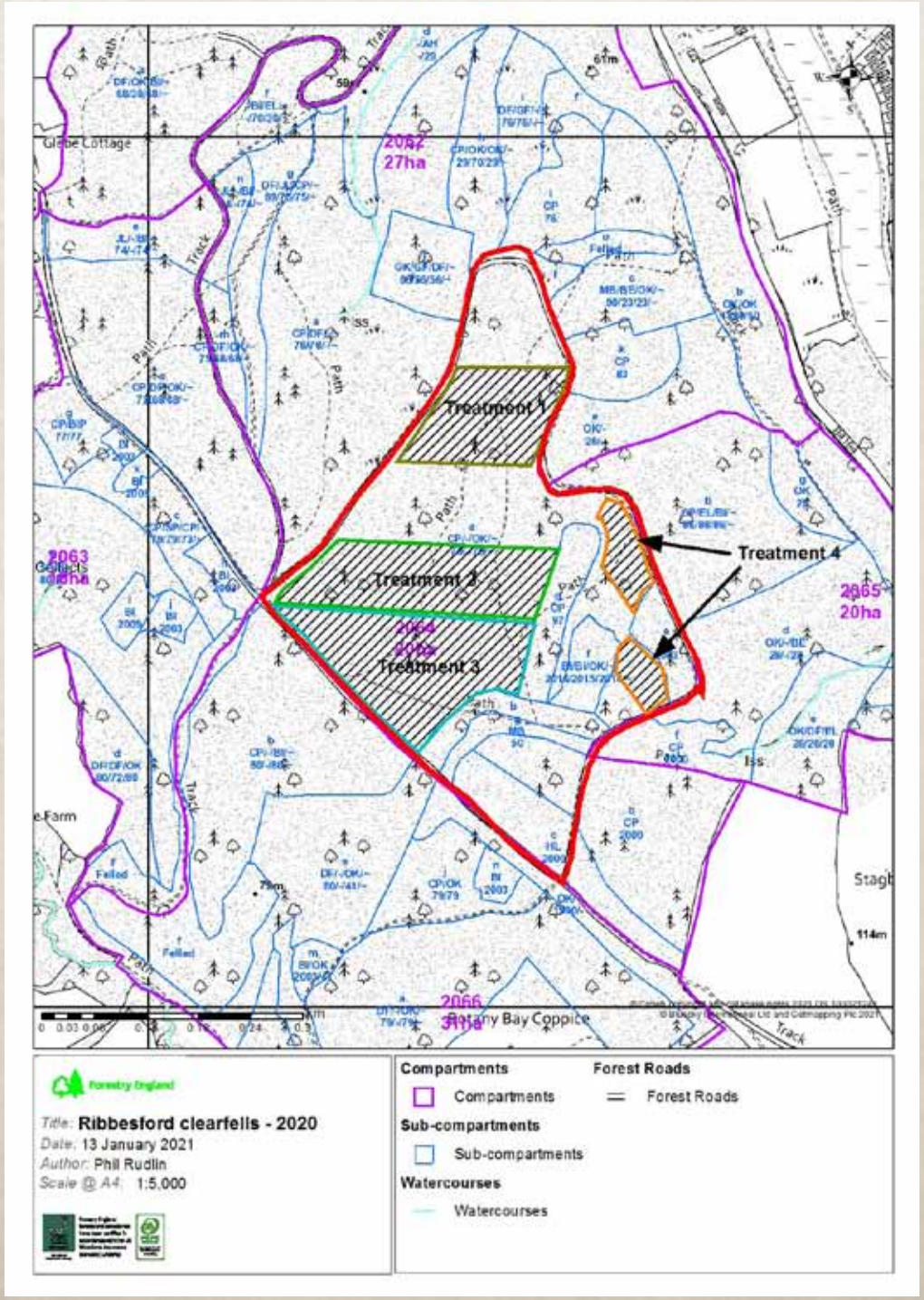

Figure 2. Ribbesford Woods clearfell areas 2020.

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Figure 3. Treatment 3 after felling. Phil Rudlin

Figure 4. Treatment 3 after felling and timber removal. Phil Rudlin

Figure 5. Treatment 3 after mulching. Phil Rudlin

Figure 6. Harvester in action. Phil Rudlin

Figure 7. Mulcher in action. Phil Rudlin

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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). Despite being furloughed in May I was able to carry out the survey during my daily exercise. (Betts Reserve checked June only).

Table 7. Dormice and fresh nests in Wyre 2013 - 2020.

	Button Oak		Longdon		Wimperhill		Parkhouse		Betts	
	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**

A small plantation of 17-year-old Scots Pine on Longdon Orchard is now an established Dormouse site with 30 boxes and records for the eighth year. One adult was found in May, two in June and July 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 in-situ around Park House since 1997. Records have been few and far between. However, over the last five years a small number of Dormice have been found in Hazel coppice beneath mature Oaks, established using temporary fencing to keep the deer out. A female was found in the same box in May, June and July, although no signs of breeding were seen.

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 2020. However, an adjacent area, felled in 2011, is now looking good and is likely to support Dormice. Boxes will be erected in 2021 and we will see.

Thirty boxes were checked in a 21-year-old Corsican Pine plantation at Button Oak. Three adults were found in May, Three in August and two juveniles in October.

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. 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 were found in 2020.

Conclusion:

As Table 7 shows, the numbers on all sites in Wyre seem to be down. This is disappointing, particularly as Ribbesford recorded one of the best years. However, all Wyre recording areas are very small in a large woodland landscape so I suspect they are more common than we realise but will always be difficult to find!

Dormouse found in April, snoozing in a box of fresh Birch leaves. Phil Rudlin