



Newsletter

Welcome to the latest issue of the Surrey Dormouse Group Newsletter!

Another dormouse surveying season is drawing to a close. Dormice are settling down for hibernation. License holders are washing their dusters and submitting their annual returns to the NDMP. Time for a cup of tea and something to read by the fire.

In this issue we have a summary of research carried out by an MSc student at Merrow into different ways of detecting dormouse presence. We also have the results of some fascinating research, drawing on data from SDG, into the effect of birds nesting in dormouse boxes on dormouse numbers. We learn about the troublesome cousin of our hazel dormouse, and hear

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what it's like to be a SDG trainee. We also have a site focus on Nower Wood, one of our oldest monitored sites, and updates from some of our other sites.

Gaining a dormouse handling licence with SDG

Alexandria Shaw, our newest license-holder, shares her experience of being a SDG trainee

The Hazel Dormouse is a protected species, which means anyone who wishes to handle dormice needs to be licenced to do so by Natural England. As an Ecologist it is essential for me to have a licence to survey protected species as part of my work with an ecology company.

I joined the SDG in 2016 to gain experience handling dormice and eventually work towards getting my licence. During the past two years I have worked with a number of experienced licensed surveyors and I have been expertly mentored by Julie Mottishaw. This has enabled me to gain such valuable knowledge of hazel dormice.

During my time training with SDG I have seen a number of weird and wonderful things including grumpy wrens, pygmy shrews, bounding juveniles and conversely some very lazy dormice that haven't even bothered to make a nest! Each site is different, and that is what made the experience so interesting.

The mentoring scheme at SDG goes further than teaching you the basics for getting your licence. The group also provides you with the skills to confidently lead a check and educate others. I would certainly encourage anyone working towards their licence to take part in this fantastic mentoring scheme.

Hopefully I will see everyone again next year and I am looking forward to passing on the knowledge I have gained from everyone at SDG.



(photo courtesy of Ali Shaw)

Shooting the dormouse

Samantha Beard shares the results of her MSc project on non-invasive methods of detecting dormouse presence

There is a certain thrill when finding a dormouse curled up within a nest box and it is, undeniably, a rewarding sight.

However, using the common survey methods of nest box or tube checks may not necessarily be the best way to detect their presence. Collecting positive presence data relies on a dormouse being in one of the nest boxes or tubes when checking them. For all the effort put into this method, the quality of the data is generally poor as it does not always reflect the level of presence of dormice in an area.

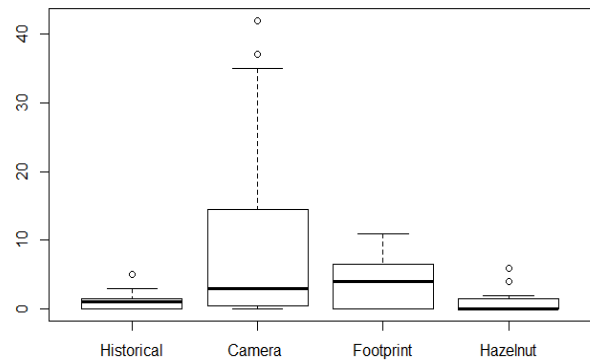
With recent studies of arboreal mammals, numerous alternative non-invasive surveying techniques have been created which could be applied to surveying dormice to give a more accurate indication of the level of dormice presence in an area. For my Masters dissertation I tested three alternative, non-invasive methods against the current method of nest box/tube checks with the aim of finding the method which has the highest rate of success when detecting dormice.

These were; camera traps, footprint identification and the use of hazelnuts to identify tooth markings to see if the dormouse would eat the nuts out of season. My study lasted two months and took place in the Merrow Downs, near Newlands Corner, at the site of an ongoing dormouse survey run by Thomson Ecology. I constructed fifteen modified squirrel proof cages with bait to host my methods; three camera traps, six footprint ID cages and six hazelnut cages.

Every three days I would check, clean, bait (with peanut butter) and collect my data. I considered a positive result to be a clear image of a Hazel Dormouse within the cage,



Number of dormice detected by different methods



a clear and uncompromised footprint and a hazelnut shell with dormouse markings within a 1.5 metre range of the cage.

Thomson Ecology kindly gave me the data from their dormouse survey, which I compared my data to. The simple box and whisker plot above demonstrates the success of each method, with camera traps being a clear winner as they detected the most dormice despite one camera failing. Detection through nestbox/tube checks was, surprisingly, the least effective method.

Cameras have multiple positive aspects when detecting dormice as they reduce disturbance, there is no need for a licence holder, they can be set up with little/ to no training, you can make multiple visits without risk of breaching laws protecting dormice and they provide greater time efficiency resulting in lower cost but producing higher quality data.

Which is why I would recommend shooting the dormouse, with cameras!

However, there is merit in the physical surveying of dormice as it is valuable when monitoring their status. Therefore, it should not be abandoned but perhaps can work hand in hand with cameras to combine constant, non-invasive monitoring and hands-on surveying.

Of course, this can only be achieved when someone invents a squirrel proof cage that works!

(photos courtesy of Samantha Beard)



Do breeding birds compete with dormice or provide a hidden benefit when they use dormouse boxes?

Robbie Phillips, who's doing a degree at the University of Exeter, explains his research into what happens when both dormice and nesting birds want to use the same nest boxes.

Research findings

Having carried out bird nest box monitoring for the British Trust for Ornithology over the last few years, I was interested when 90 dormouse boxes were put up at our local nest box site. What effect would nesting birds have on the take up of these boxes by dormice?

A simple experiment was conducted to create one dormouse box treatment where the dormice had competition from birds, and one where there was reduced competition. This was done by sealing half of the dormouse boxes until the 1st May, with the other half always being available. By this date most birds were already sitting on full clutches of eggs. When the originally sealed boxes were made available there was minimal uptake by birds, therefore creating the reduced competition box treatment. Blocking of the boxes proved to be an effective method to reduce their use by birds, with only 1/45 being used compared to 17/45 of the open boxes having birds' nests in by June. But did this result in more dormice in the reduced competition boxes trying to avoid nesting birds? Well, partially. Approximately the same number in both box types in May, but significantly more dormice in the reduced competition treatment by June. Therefore, it does seem that dormice do avoid competition with birds when choosing boxes.

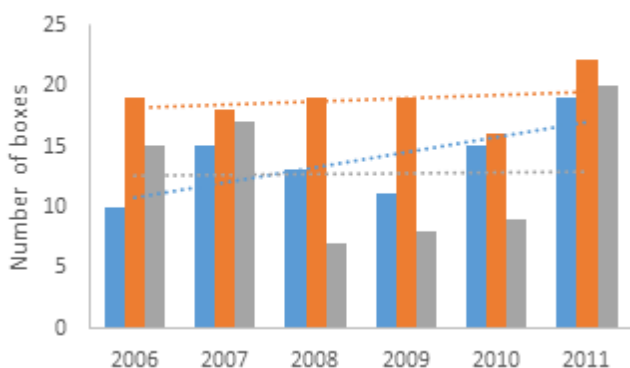
Later in the year when all the birds had fledged, there was another question we wanted to answer: what was the impact of the remaining bird nests on box choice by dormice? This time the two options for dormice were either a box with a bird's nest in it, or an empty box. We found that dormice far more often chose to use a box with a bird's nest over an empty box. Over twice as many dormice and dormouse nests were found in empty birds' nests than what would normally occur by chance.

What does this mean for Surrey?

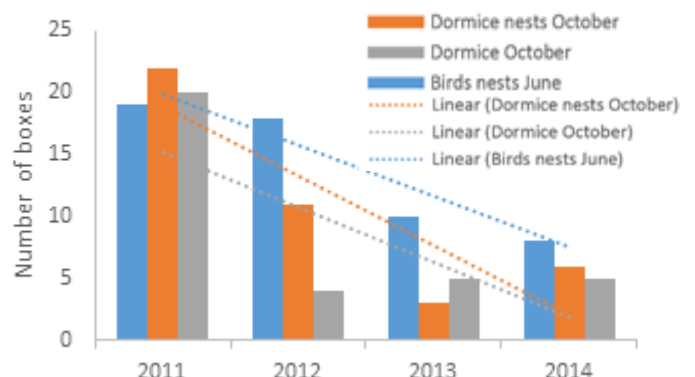
Surrey still proves to be a stronghold for dormice, and there are a large number of dormouse monitoring sites across the county. I personally have explored the data of 16 sites, with some having up to 9 years of continuous monitoring.

The majority of sites have approximately 20-30% of boxes being used by birds for nesting similar to the rest of the country, however two of the sites have higher rates of occupancy by birds during the spring; Chilworth with 33-50% box use by birds between 2009-2013 and Merrow with 36-48% between 2006-2014. Interestingly, these two sites also experience the highest number of dormice, with both Chilworth and Merrow having an average of 10 dormice per

Change in the number of birds nests, dormice nests and dormice between 2006-2011



Change in the number of birds nests, dormice nests and dormice between 2011-2014



50 boxes during October. Other sites such as Pewley, Moat and Juniper Hill had only around 3-5 dormice per 50 boxes during October, with these sites also having lower number of nesting birds in boxes earlier in the spring. Pewley, which was the site with the least bird use, with only between 4-12% of boxes being used between 2006-2010, also had the fewest dormice recorded, with none being recorded in the month October during the 5 years of monitoring. Despite this correlation between high box use by birds and dormice, it does not necessarily mean that bird nests are the cause. There may be other factors, such as habitat type, which when suitable, result in a high number of both breeding birds and dormice.

One site, St Cross, has helped to answer this question as to whether birds really do benefit dormice. It has a slightly above average uptake by birds of 38% but by far the highest uptake of dormice compared to any other site with an average of 15 dormice per 50 boxes in October from 2006-2014. Why is this? Well, looking at it year by year, one can see that, between 2006-2011, there were higher numbers of birds' nests, dormice, and dormouse nests. However, between 2011-2014, the number of birds' nests halved with dormice/dormouse nests reducing by 75% over this same time period. With such a dramatic change over

just 3 years, it is unlikely that the habitat structure changed drastically over this period and therefore suggests that it is birds' nests that dormice are choosing, and that they do have a beneficial effect on dormouse populations.

Why?

Currently, we believe the reason that dormice are more often found in old birds' nests is because they provide additional nesting material and insulation, which the dormice can then retrofit when building their own nests, saving both time and energy. Whether this is adaptive is another question as birds' nests often contain large amounts of parasites once used, and it is unclear if these could potentially impact the dormice using these nests.

What can you do?

So next time when it comes to deciding when to clear out birds' nests from boxes, it is worth thinking twice and considering leaving the birds' nests until the winter before removing them. Of course, there are exceptions, such as when nests are dirty and wet and unlikely to be used, and the box monitor's discretion should always be used.

Roger Trout: Glis in the Chilterns

Annabelle South reports on the recent SDG talk about edible dormice

In November, SDG had the pleasure of hosting a talk by Roger Trout about *Glis glis* (edible dormice) in the Chilterns. Glis were introduced to England at the beginning of the twentieth century, when they escaped from the collection of Lord Walter Rothschild in Tring. Since then, they have established a growing population in a (until now) fairly contained area around where they escaped. They expand their range through moving with logs being transported, or by being released into new areas by people trying to get rid of Glis from their homes.

Glis are a European Protected Species, but Britain did not enact that part of the legislation, and they are considered an Alien Pest Species. There is an Open License for humane killing.

Glis cause four main problems in Britain:

1. Predation of hole nesting birds
2. Impact on hazel dormice

3. Impact on bat boxes
4. Impact on forestry

They can also cause problems in people's homes, including damaging electricity cables and pipes, creating disturbance and causing a health hazard.

Roger spoke about the monitoring studies he has been involved in. Since 1995 almost 10,000 Glis have been microchipped. This has shown that Glis can live for up to 14 years in the wild in Britain, and may even hibernate for 18 months when food is scarce. They also do not breed in non-mast years.

One striking point from Roger's talk was, besides the work he is involved in, how little research is being done about Glis in the UK (and how to deal with the increasing population).

Box checks are carried out every two weeks during the season, and SDG members are welcome to attend.

Site focus: Nower Wood

Dave Williams introduces us to one of Surrey's oldest NDMP sites, which has been regularly monitored since 2004.

Nower Wood is 80 acres of ancient woodland on the outskirts of Leatherhead. It consists of ancient oak and chestnut, interspersed with birch, and several areas of hazel coppice. It is owned and managed by Surrey Wildlife Trust (SWT) and is designated as a Site of Nature Conservation (SNCI). Nower Wood is the home of SWT education centre with thousands of school children attending to see and learn about nature, including pond dipping in several ponds on the site. It is not open to the public except by appointment.

In 2001, rumour had it that someone had found a nibbled nut from a dormouse and eventually about 30 dormouse boxes were put up in the hazel and chestnut coppiced areas. Fortunately this part of the wood was not usually visited by the school groups. The boxes were put up by my predecessor at SWT but were not regularly checked until I took over in 2003, and began a regular monitoring schedule in 2004, and increased the number of boxes to 50 to comply with NDMP requirements. Up until then no Dormice had been found, and it was thought that maybe there were none there.

However, in April 2004, in box 13, we found our first dormouse. I can still remember it, I was with a young Nower Wood volunteer, and when we put the box in the big bag and removed the lid out jumped a dormouse and she squealed out 'it's a dormouse'.

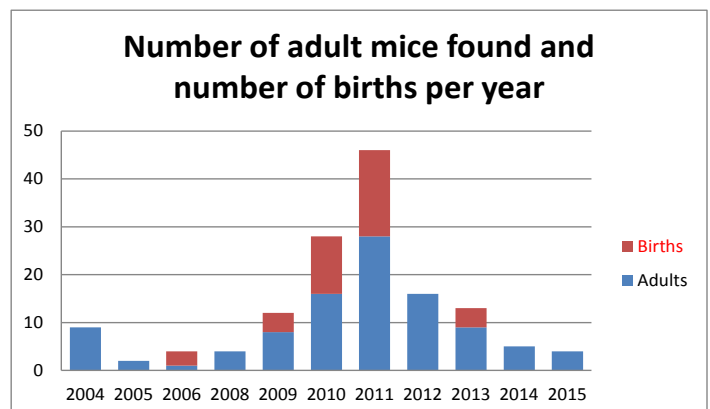
Monitoring carried on as part of my work as Mammal Officer at SWT, with either staff or volunteers from Nower Wood. In 2015 I left SWT but as you know continued with the dormouse project that I had started and continued monitoring Nower Wood as a volunteer. Although not high numbers, we have had dormice every



*Replacing holly and birch with hazel at Nower Wood
(photo courtesy of Dave Williams)*

year since. The peak was in 2011, when during that year we had 46 dormice contacts, but since then it has been gradually reducing. Dormice had bred there most years, but not since 2013, until this year we had one nest with 4 young. We have been doing some limited habitat work and planting dormice suitable plants, but on a small scale.

I have records since 2004, and a volunteer at Nower Wood has done some analyses, for 2004 to 2015, although the data for 2007 is missing. In the early days we did not have the online reporting forms, but paper forms completed with a pen and posted to PTES.



An interesting incident happened in January 2016, I had been doing habitat improvements with some of the Nower Wood volunteer teams, as we made our way back after a good day's work, and I decided I would show them a dormouse nest in a box that I remembered had dormice in during autumn 2015. As I put my hand in the box I was surprised to find a dormouse fast asleep. Had it been there all winter? In February after more habitat work I looked again in the same box and to my surprise there were two dormice, both in torpor. In March the nest in the box was empty and was never used again that year.

It was at this site in October 2008, that I found my first snoring dormouse, unfortunately videoed without sound, this was put on You tube, it went viral and was seen all over the world.

Nower Wood is a wonderful place. SWT have plans for timber extraction on the site and I will be interested in what effect this has on the site itself and the dormouse population.

Highlights from around our sites

Chilworth

Still no sign of a dormouse at Chilworth... until... in



*Dormouse nest at Chilworth
(photo by Xenia Snowman)*

October we found this:

After feeling a warm furry body the excitement was high, until we found two juvenile wood mice in residence. I'm still hopeful that the nest, woven from old bluebell stems, was the work of a dormouse so we will be doing

a check in November with everything crossed. We were also privileged to find baby pygmy shrews in a box earlier in the year and watched as their parents went back and forth non-stop to feed their young, it was a lovely experience.

Julie Mottishaw

Wildwood

We seem to have just one favourite box, number 41. Over the season it's housed individuals and for two months there were 3 dormice sharing the box. In October it was down to just one again and interestingly it's not been used to raise a family. We did find two dormouse nibbled nuts on the path on the way back to the cars after one check, very close to the A25, showing just how good the habitat is around the golf course and the Newlands Corner area.

Julie Mottishaw

Roughs 2

At Roughs 2 we finally seem to have good numbers of dormice! After setting up the site last June and having nothing all year, our last check had seven dormice in total and we have had our first litter!

Jess Smith



*Grey dormouse at Roughs 2
(photo by Jess Smith)*

Box Hill

A successful year with more boxes having nests built in them; especially in site 2 which was only set up this February. Site 1 had a total of 13 nests with 24 mice monitored, whilst site 2 had 14 nests and 26 animals measured, however in August we had to remove 5 dead pinks from one nest.

The highlights of the year would be seeing 2 dormice scuttling along the dead hedge around the coppiced area and 2 charming rangers determined to gain every experience and skill towards gaining a licence. *Pip Wood*

Polesden Lacey

We've been lucky enough to find lots of breeding activity at Polesden Lacey. Our September box check was remarkable, with more than 40 dormice spread across 9 boxes, although most of the youngsters had disappeared (hopefully to natural nests) by October. We've had signs of dormice in nearly every part of the site, which is encouraging, although they do seem to prefer the boxes we put up three years ago to the older boxes.

Annabelle South

And finally...

As ever, we'd love to hear what you think of the SDG newsletter, and even better, for you to get involved in the next issue. If you have any photos for the next issue, or would like to write an article, or suggest something we should cover, please email

info@surreydormousegroup.org.uk

Thanks to everyone who has contributed to this newsletter.

Useful links

- [Surrey Dormouse Group](#)
- [Surrey Dormouse Group Facebook group](#)
- [PTES training information](#)
- [Dormouse monitor](#)
- [Wildwood](#)
- [British Wildlife Centre](#)

Contact us

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