# HEREFORDSHIRE MAMMAL GROUP AUTUMN NEWSLETTER

*(October to December 2016)*

## What's Inside?



## AUTUMN EVENTS

### October

Sunday, 2 October, 2016 at 10:00
**Dormouse Box Check**
Chase Wood, Ross-on-Wye
Meet at SO603229 at top of unmade track
Contact Denise Foster via HMG

Saturday, 8 October 2016 at 10:00
**Bat and Dormouse Box Check**
Two teams required
Frith Wood, Wellington Heath
Meet at wood entrance at SO723405
Contact Denise Foster via HMG

Saturday, 15 October 2016 at 10:00
**Bat Box Check – Lea and Paget's Wood**
Meet at SO595346 (lay-by, Hawkers Lane)
Contact Denise Foster via HMG

Thursday, 20 October 2016 at, 19:30
**HMG - AGM**
Bunch of Carrots Inn, Hampton Dene, Hereford, HR1 4JR.

Monday, 31 October 2016 at 10:00
**Bat Box Check – White Rocks and Woodside**
White Rocks & Woodside Nr. Doward
Meet at Miner's Rest car park at SO553158
Contact: Mike Bailey via HMG

**November and December Events**

We will be carrying out both field and classroom events over the winter months, including a sound analysis workshop to analyse the data collected from the Bats and Roadside Mammal Transects, bat and dormouse box maintenance days and some late bat and dormouse box inspections. The Committee is also in the process of organising speakers for our winter programme, so keep an eye on Facebook and the website. So far we have two speakers booked, Roger Trout talking about his work with small mammals in January and Dr. Danielle Linton talking about the Wytham Wood Bat Project.

### AGM – 20th October 2016

This year's AGM will be held at the Bunch of Carrots starting at 19:30 prompt.

Nominations for officers and items for the agenda need to be sent to Dave Smith by 6 October. Additional committee members can be co-opted – please contact the committee if you wish to be considered.

The AGM will be followed by a film recorded by a study group in Flanders called "How to live-trap dormouse and (almost) nothing else." You will be surprised and amused at how acrobatic other small mammals, other than dormice, are!

## NEW MEMBERS

We would like to welcome the following new members to HMG:

Caroline Lidgett, Graham Saunders and David Nixon

## MEMBERSHIP

**Mike Coleman, Membership Secretary**

We currently have 77 paid up members in HMG and 224 followers on Facebook. Remember, join the Mammal Society and get HMG subs free!

Facebook - HMG has an active Facebook page where we post all our events past and present: www.facebook.com/groups/222077991279736/

## NEWS IN BRIEF

### Herefordshire Rodent Atlas

The Herefordshire Rodent Atlas is nearly complete and will be free to download via our website.

Two sets of distribution maps have been created for the Rodent Atlas using records taken from the Herefordshire Biological Records Centre (HBRC) and the National Biodiversity Network Gateway (NBN). This baseline data will help us target particular areas where records are absent. We would like to thank HBRC for supplying the majority of the records and also HMG members for collecting records during field trips.

Distribution maps are still ongoing and atlases for other groups of mammals will be available in the near future. In the meantime, we ask members to continue to submit as many mammal records as possible to build up our database.

### Dormice Discovered in Private Woodland North-east of Penyard Park

Twenty years ago, Gerry Lowth from Weston-under-Penyard decided to plant a selection of broadleaved trees on his land, which lies north-east of Penyard Park. The habitat is not particularly ideal for dormice as there is hardly any understorey. However, being optimistic, Gerry installed 10 dormouse boxes a few years ago, and asked the group to monitor them periodically. Considering the habitat it was rather a surprise when one male and at least 2 juvenile dormice were discovered in neighbouring boxes. In 2011 and 2012, HMG carried out tube surveys in Penyard Park and after 2 years just one dormouse nest was found on the north side.

The distinct furred tail of a dormouse!

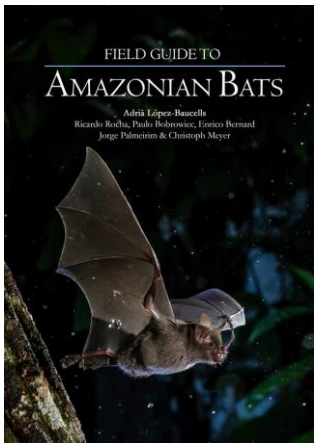
### HMG in the Press, New Record for the Woolhope Dome

Photo: Bechstein's bat

In August 2016, HMG carried out a radio-tracking project, funded by the Woolhope Dome Environmental Trust (see below for full story). During a trapping session at Devereux Park a post-lactating Bechstein's bat was caught and subsequently fitted with a radio-tag. She was tracked back to woodland on the east side of the Dome. A new maternity roost was discovered and members counted out between 65 and 70 bats from a tree roost. This is the first record, and a very significant one, for Bechstein's bats in the Dome. The story can be found at: **http://tinyurl.com/HMG-Bechs-News**

**New Field Guide to Amazonian Bats by** López-Baucells et al (2016), National Institute of Amazonian Research, Manaus, Brazil.

For members interested in learning about tropical bats, this book is free to download. It is designed as a guide aimed at researchers conducting field work on bats in the Amazon. It is an easy-to-use guide that would be both practical and visually appealing.
http://tropicalconservation.net/?page_id=10




## HMG at Ashfield Primary School, Ross-on-Wye

Leigh Russell and Denise Foster represented the mammal group during Hedgehog Day at Ashfield Primary School in Ross-on-Wye in September. Several groups of children visited us in the main hall to learn about Herefordshire's mammals. We talked to children from ages 4 to 10, and after an interactive session all the children were very excited to meet Princess, a captive common pipistrelle.

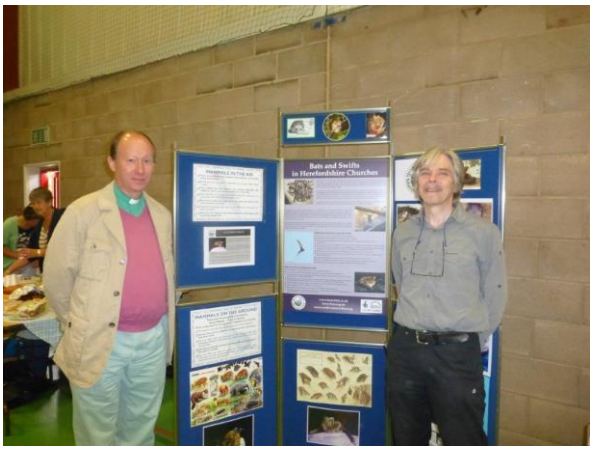
At least 150 children heard about Herefordshire's Mammals.

There were hedgehog events throughout the day organised by Yolande Watson who did a great job, particularly in that costume!

Yolande Watson, the person behind the costume at Hedgehog day!

## HMG at Wigmore Village Show

In September, HMG were asked to attend the Wigmore Village Show to promote our good work, particularly with Churches. The day was slightly disrupted by high winds which meant that outside stalls had to be relocated indoors. There was a steady flow of people who visited the show and came to chat with us at our stand.



David Lee with the Vicar of Wigmore church who visited our stand and took away a bundle of HLF funded project booklets for his 9 churches.

**Invasive Species Alert - Asian Hornet**

Vespa velutina, also known as the Asian hornet, is an invasive non-native species from Asia. It arrived in France in 2004 where it spread rapidly. As a highly effective predator of insects, including honey bees and other beneficial species, it can cause significant losses to bee colonies, and potentially other native species.

The National Bee Unit has confirmed a sighting of the Asian hornet in the Tetbury area of Gloucestershire in September 2016 - the first time the hornet has been discovered in the UK. The places it is most likely to be found are in southern parts of England or goods among which it could be accidentally imported (such as soil with imported pot plants, cut flowers, fruit and timber). Active months are between April and November (peak August/September). They are inactive over the winter.

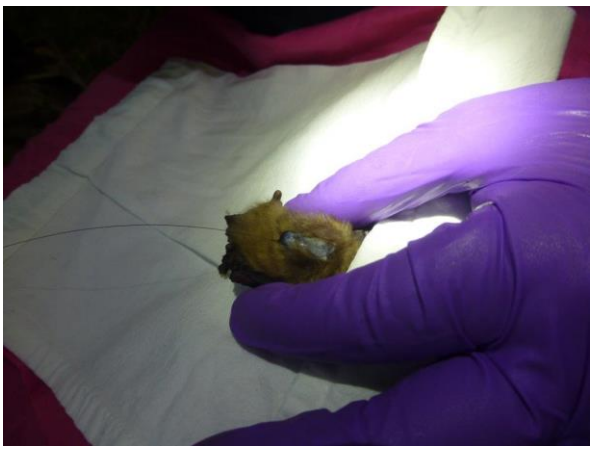
Keep a look out for this insect whilst carrying out dormouse & bat box checks etc.

For further information and details of how to report sightings see
**www.nonnativespecies.org/alerts**

Asian Hornet is about 2.5cm long. Photo taken from the BBC website

## Radio Tracking Bats on the Woolhope Dome – A Successful First Project!

In August HMG carried out a radio-tracking project in the Woolhope Dome that was funded by Woolhope Dome Environmental Trust. We radio-tagged a total of 4 bats: a female Daubenton's at Haugh Wood, a female brown long-eared and Natterer's bats from bat boxes at Lea and Paget's and a post-lactating Bechstein's bat caught at Devereux Park.


Radio-tagging a long-eared bat at Lea and Paget's Wood in August

The weather during the week could not have been better for field work even though it was rather warm on some days. During the project, we found a total of 8 new roost sites and we were able to follow some bats to determine foraging areas. We were rather surprised at one roost site for the Natterer's bat – an old Perry pear tree in the middle of an open field! We would like to thank our experts for coming to help with this project: Danielle Linton, Keith Cohen, Adrian Bayley and John Morgan who helped enormously in making the event a great success.

As this was our first radio-tracking project there were some lessons learned from our experiences, one of which was poor communication. Weak mobile signal and inappropriate walkie-talkies for the project hindered the team on many occasions. There will be a full report produced about the project. If you are interested in receiving a copy, please contact Denise Foster, Bat Co-ordinator.

So what did some of our team think about the project.....

**The First Tagged Bat by Leigh Russell**

After joining the group 4 months ago I wasn't sure what to expect from the bat tracking project - will we catch the right bats to tag? Will we ever find them again? Will the weather be on our side? I wasn't sure of the answers, but I was encouraged by the buzz of the group and I'm always up for a challenge!

It all started on day one with a bat trapping session in Haugh Wood in which fellow

experienced batters imparted their knowledge around bat ID, bat handling techniques and how to apply a radio tag to a bat. When a female Daubenton's bat was caught there was a collective sigh of relief and the excitement mounted around if and when we would catch up with this bat again.

Day two bought us a lovely sunny day in which Adrian delivered a very informative session on using the radio tracking equipment. He had us hiding behind trees, looking for hidden trainer tags and bonding as a 'tracking team' - we all learnt a lot and it was great fun. On the afternoon of day two we set out to find the Daubenton's bat in teams of two. We tracked a few electric fences (which Adrian warned us sound like radio tags!) but once we got that first "beep, beep, beep" the adrenaline kicked in and with a large helping of perseverance and great team work we found our critter 5km away from where it was caught!

Working with Kate, Mike & Giles was great fun, a little competitive and we all learnt a great deal. However, it isn't without a little disappointment that the Daubenton's was never found again. Overall the project was really exciting, great fun and tiring!! When can we do it again???

**Radio Tracking Bats in the Woolhope Dome - a Beginner's Perspective by Kate Wollen**

I had pencilled in the 11th August to help with the radio tracking project, but I really had no idea of what it was going to involve beyond a trapping session in Haugh Wood on the first day.

So what developed that following week was an amazing and totally memorable experience that gave us such an insight into a bat's life.

Evening 1: Trapping at Pentaloe Brook in Bears Wood, Haugh – a little after midnight, just as we were about to pack up, having not caught our target species, a female Daubenton's bat landed in one of the nets and she was of sufficient weight to fit a radio-tag! A new experience for us all, Denise glued the tag in true Blue-Peter style, then off the bat flew to continue feeding over the Brook.

The female Daubenton's bat tagged at Pentaloe Brook.

Day 2: A bit of a lie-in, we met mid-morning and had a training session given by Adrian Bayley from the Devon Bat Group in using the expensive radio tracking equipment. I had only once used radio tracking equipment to try and find wild boar many years ago and I failed then. So although the training was great I did not feel very confident in finding something much smaller!

Adrian Bayley gave training to our members on how to radio track bats.

Meanwhile Denise, David, Keith and Dani went off to check the bat boxes in Lea and Paget's Wood, where they found a long-eared and a Natterer's bat to radio-tag. After our training with Adrian, four of us set off to try and find the Daubenton's bat, which quite frankly could have been virtually anywhere as they do travel some distance. We later learnt from Adrian that it is very hard to find a tagged Daubenton's again!

However, luck was with us - or was it skill! Giles and Mike picked up a signal from a high point at Capler Hill, which indicated 'go west'. Meanwhile, Leigh and I were getting acquainted with EVERY electric fence in a 5-mile radius of Haugh Wood! We eventually went west having picked up signals that were not electric fences

and amazingly we met Giles and Mike going to the same wood in Little Dewchurch, at the same time with the same conclusion (phone and radio signal having been temperamental for a while).

So we went to the higher side of the wood to try and get more of an indication of where in the wood to go, while Mike and Giles went into the wood. Both of us lost the signal and then miraculously at about 5pm, as Mike and Giles moved higher in the wood, there was that lovely cheeping (like chicks in a nest) sound of the radio tag coming from a large conifer; a Douglas fir with a light covering of ivy. The tree did not appear to have any holes or cracks in the area where the bat was roosting so was it just behind the ivy?

Once permission has been obtained from the owner we need to examine the tree more closely. That evening the mission was to track the bat as it emerged so at around 21.30 hrs we saw and heard it emerge - no other bats seemed to be with it. She flew within close range of us for a short while then was picked up about 45 minutes later some distance away by Dani who was positioned at Holme Lacy Bridge.

We then lost her until midnight when Rich and I picked her up almost exactly where we trapped her and at a similar time back at Bears Wood, Haugh. She was there for 10 or 15 minutes before we lost her again. That was the last time we saw or heard her despite us trying all week to find her again. If she flew in a straight line (very unlikely) she would have flown over 6km to and from Haugh Wood.

The feeling when you pick up that cheep-cheep of the signal is quite something as you feel part of a bat's world, following their movements and trying to start thinking like a bat in order to find them again! It was such a privilege!

Meanwhile another team that same night tracked the female long-eared and Natterer's bat, as they emerged from the bat boxes. There were 31 Natterer's bats in the bat box. Our tagged female Natterer's foraged north of Siege Wood so not too far from Lea and Paget's Wood. Then we all went to bed!

Day 3: The long-eared had not gone far but had moved from her original roost of the bat box. She was in a woodpecker hole in an oak tree in Lea and Paget's Wood. The Natterer's bat was found in a large hollow in a small Perry pear tree, one of only 3 remaining trees in what was once a traditional orchard, about a kilometre from Lea and Paget's. Luckily I knew the orchard owner so it made access easy!

Perry Pear tree which contained over 20 Natterer's bats.

That evening we carried out roost counts on both the Natterer's bat and Long-eared roost sites: 21 natterers from the Perry pear and 16 long-eared bats from the oak tree. We followed them for a while seeing where they foraged, which was never too far from their roosts (within 1 km). Meanwhile another team were trapping by the lake in Devereux Park just below the Woolhope Cockshoot. An optimistic target for that night was a Bechstein's bat, even though there were no records of Bechstein's on the Dome. Much to our surprise, a post-lactating female Bechstein's bats was caught very low in the net and subsequently radio-tagged!

Day 4: We now had 4 bats tagged so the first thing to do was check if the Natterer's and the long-eared were back in their last roosts. The Natterer's was back in the pear tree but the long-eared had moved again. Once again not far, about 500 metres or so, and first appeared to be in a huge ash but then we established it was

most likely to be in the neighbouring car port of a house, just beyond Lea and Paget's Wood.

Natterer's bats inside the hollow of the Perry pear

Then it was off to find the Bechstein's bat which was found later that afternoon in an old ash tree in a wood some 2 kilometres or so from Devereux Park. We were getting quite confident now of finding bats and that joyful feeling of picking up the cheep-cheep signal was as strong as ever!

That evening ALL involved in the project spent a very peaceful and fairly comfortable early evening lying on the side of a public footpath in the wood watching the ash tree. We were quite a sight, so I am very glad no walkers came along as they may have thought all the down and outs in Herefordshire had decided to set up camp in the wood! The weather was perfect during the whole project - hot in the day and warmish at night, so lying on the ground watching roosts was no hardship!

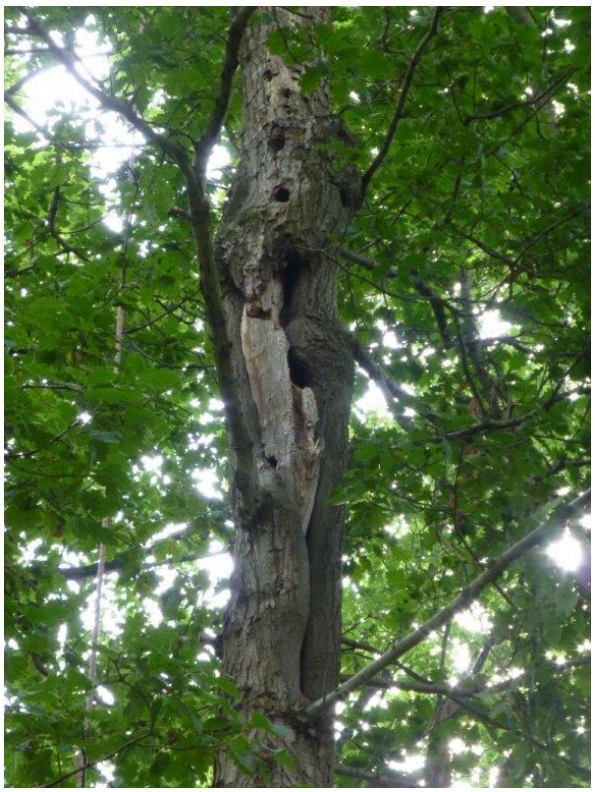
We counted 43 bats out of the ash tree that night and then followed our tagged Bechstein's for a while tracking her foraging over the Marcle Ridge side of Woolhope as she headed back towards Devereux Park. She generally foraged about 3 km from her roost.

Days 5-8: We were getting into a routine now of get up, go to the last known roost and if the bat was not there, find it! The long-eared tag did not move again from the car port - we believe the tag fell off inside the car port, although it was not possible to completely confirm this as the owners were not at home to gain access to the property.

The ash tree where 59 Bechstein's bats were counted out

The Natterer's bat decided to move again on day 5. After a morning of walking in glorious sunshine we almost got savaged by a pack of dogs on the public footpath just outside Lea and Paget's. However, we were on the 'track' so nothing was going to stop us! When we got into the wood, the signal was bouncing around and led us on a few false wild bat chases until we found her in an old oak coppice stem in an unmanaged farm woodland just under 1 km from both the Perry pear tree roost and Lea and Paget's Wood. That evening we split up – some went to count the Bechstein's bats out - this time 59 were seen emerging. Some went to watch the oak coppice to try to establish which crack the Natterer's bat would emerge from and then I returned to the Perry pear to count how many Natterer's bats were still in that tree. A total of 17 bats emerged from the pear tree and approximately 10 emerged from the oak stem.

The following day the Natterer's bat moved back with her friends to the Perry pear tree, where she stayed every day until the final day of the project when her tag fell off by the tree, just before the battery expired.



The second natural roost site for 10 Natterer's bats including our tagged bat.

The Bechstein's bat returned to the same woodland but moved roost 3 times over the following days. A maximum of 65-70 bats were counted.

Every night, we tracked the bats for a while to get an idea of their foraging areas – the Natterer's bat did not go far and neither did the Bechstein's but she did venture a little further, about 2 to 3 kms or so. But none of them went as far as the Daubenton's (Haugh Woods to Little Dewchurch). We tried so hard to find the Daubenton's bat again and felt quite sad that we did not manage to do so, as we never did get to know her as well as the others, whom I felt quite attached to by the end, especially the Natterer's who I met every morning and night!

The batteries were only designed to last either 5 or 8 days so after 8 days the project sadly ended, and I felt like there was something missing for a while!

The weather and company were perfect, the scenery in the Woolhope Dome made all the walking and driving so enjoyable, the luck of catching all the bats we wanted and the proximity of the pubs in the area for a little cool drink made the whole experience something that I really want to repeat next year - I will be booking my summer holiday for that week! We learnt so much - bats move roosts a lot more than I realised. I also learnt that whilst a convertible car is great for using the tracking equipment, make sure that all your important paperwork is secured!

Thanks to David and Denise for organising yet another fantastically interesting and worthwhile project and thank you to the Woolhope Dome Environmental Trust who funded it!

## Bat Co-ordinator Update by Denise Foster

**Bat Box Checks -** We have carried out most of our scheduled bat box checks for this year but we have 3 more visits to do in October.

Old Country Wood bat boxes are monitored by David Lee. In the August check, we caught up with 32 female Bechstein's bats at Old Country Wood but sadly just 2 juveniles. This is the second disappointing year for this colony; the number of females has also dropped as this was a 40 strong maternity group. In the September check, which is late, we found just one juvenile male and one dead baby Bechstein's bat in a bat box.

Denise with a lonely male juvenile Bechstein's bat!

Titley Pool bat boxes are currently being monitored by Denise Foster/David Lee. We caught up with the maternity colony of brown long-eared bats again at Titley Pool in September, all 16 of them. We also installed an additional 1FS maternity box so our bats now have two large colony boxes which should be ample.

Nupend Nature Reserve bat boxes are now monitored by Nick Underhill-Day. Nick had a new record for the boxes, a Natterer's bat at his visit in July! During a trapping event in 2015 a male Natterer's bat was caught but it is still a very nice find!

White Rocks and Woodside Nature Reserves – the boxes are now being monitored by Mike Bailey so if you are interested in getting involved contact Mike directly. Mike is carrying out a check on Halloween in the hope of finding some Noctules!

Ast Wood is still monitored by Dave Smith. Despite catching Bechstein's bats at trapping events as well as 3 other Myotis species (whiskered, Brandt's and Natterer's bats), none of these species have been found in the bat boxes. HMG will continue to survey this wood using a variety of techniques, trapping, bat detectors and checking bat boxes. So far, we have obtained very different results using all three techniques which confirms to us that one monitoring technique alone cannot be relied upon.

Brown long-eared bats at Lea and Paget's Wood

Lea and Paget's Wood is monitored by Denise Foster. We have now come to the conclusion, from our radio-tracking study in August, that our brown long-eared bats have been using alternative roost sites around the wood as well as the bat boxes. Prior to ringing the BLEs we assumed we were seeing the same bats, but so far we have ringed 44 bats using this wood. We seem to be encountering mums and mainly juvenile males so mums and daughters must be roosting elsewhere! We are pleased to report we have encountered H6822 at the last box check with 13 of her friends and family – this is the BLE we radio-tagged during August.

**Woodland Bat Project and Water Bodies**

Serotine caught at The Doward during a swarming survey; a bat that is considered rare in Herefordshire.

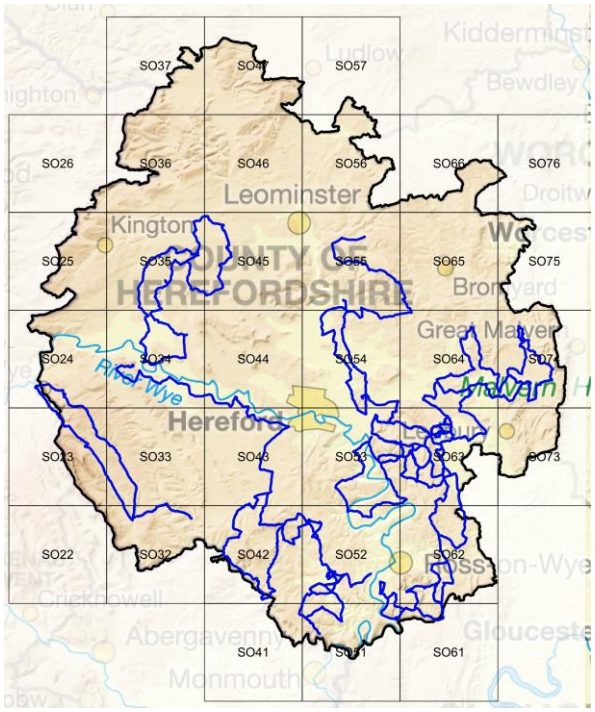
A few new woodland sites were surveyed this year including Queenswood, near Dymock and Lord's Wood in the Doward, both owned by the Forestry Commission. We also surveyed privately owned woodlands/waterbodies including Moorhouse Wood near Norton Canon, Trehumphrey Farm Lakes near Llangarron and Docklow Pools. We also revisited sites already surveyed such as Ast Wood, Frith Wood, Berrington Hall, Lord's Wood Caves and the lime kilns at Lea and Paget's Wood.

We were excited to catch a few female Bechstein's bats (some lactating) at Berrington Hall in August which we will be checking out in 2017 and may even radio-track one to find the roost site.

**Bats and Roadside Mammal Driven Transects.**

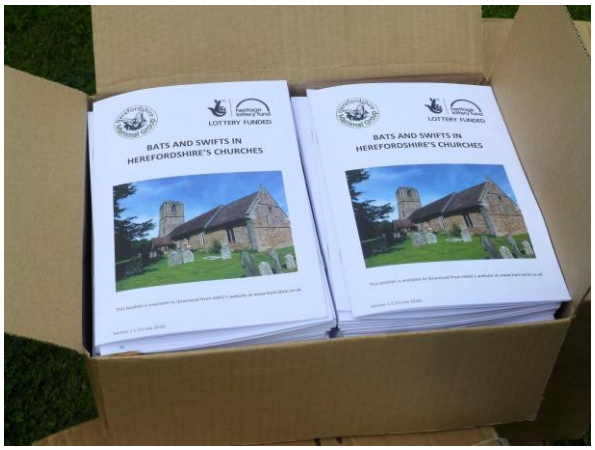
We are pleased to report that this project has been a great success! Our members have carried out 19 transects with over 550 miles

driven, collecting bat, mammal and even owl records. Our driven transect heroes are Kate Wollen who has carried out 9 transects so far, Nick Underhill-Day who cycled 65 miles on the Welsh borders and Joe Allsopp who cycled 15 miles around Pembridge area. We will be analysing all the data in a series of workshops organised by David Lee over the winter.



Transects driven by HMG members this year – a good start to the project.

**Bat and Swift in Churches Project**



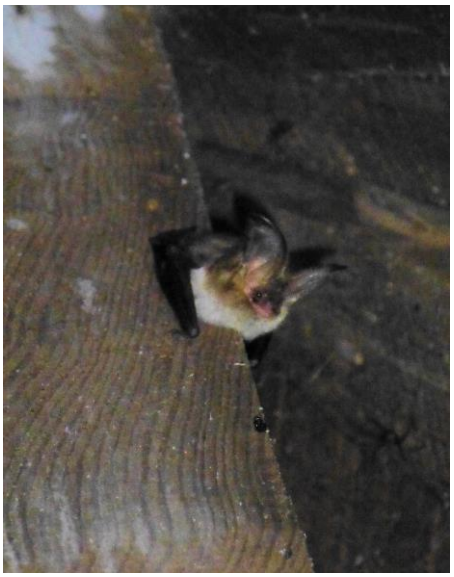
1750 A5 booklets were printed; there is some useful advice if you have bats using a church

HLF "Sharing Heritage" Grant: The funded element of our Bats and Swifts in Churches project is now complete. We have spent a total of £4,901 so only £1 over budget. A total of 10 churches have benefitted from bat and swift boxes and all churches within the Diocese will receive a copy of our project booklet which gives details on what churches can do to persuade bats to use less sensitive areas. This document can be downloaded from our website at **http://tinyurl.com/Bats-Swifts**

A total of 1750 project booklets were printed and the Diocese has offered to distribute these to as many churches as possible in both Herefordshire and Shropshire. Norton Canon church, the last church to come into the scheme has just received their box allocation and an A1 display about the HLF funded project.

A Bats and Swift evening was arranged for local people living in and around the Staunton-on-Wye area. The turn-out of between 10-15 people was rather disappointing but those who attended had a good time.

**Church Surveys**


Brown long-eared bat found in the tower at Docklow Church.

My target for 2016 year was to bring our total of churches surveyed to 100 but unfortunately we got nowhere near that number. However, we have still increased the total of churches surveyed from 61 to 78 thanks to the effort of myself, David Lee, and Joseph Allsopp. An additional 17 does not sound too impressive but bearing in mind we have carried out VBRV visits, monitoring visits, carried out bat box installations etc we have totalled 37 site visits for churches in 2016 which is very impressive indeed.

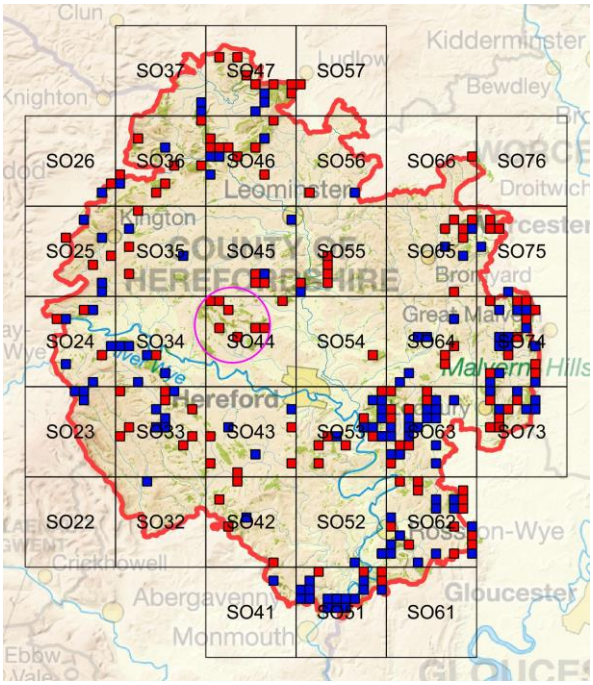
## Dormouse Coordinator Update by Ann Bowker

I wonder how this year will turn out to be for dormice in Herefordshire? I have had a disappointing year on both sides of the Malvern Hills, but down in Dymock Woods, Kate Wollen has had an unexpected number of families in her boxes for the past couple of months! At Broadmoor Common we have had tubes in the woodland which have not been used at all, but that may well be the number of deer that seem to be using the woods.

The tubes we put in at the Netherwood Estate, North of Bromyard, were similarly empty at our first check, but in September we found a nest with a fairly sketchy, but woven, interior surrounded by leaves and I think it is more likely than not that it was made by a dormouse. We are now running into the shooting season and I have not yet been able to organise our final checks, so look out for the email if you would like to help.

Dormouse nest found at Netherwood estate.

The Dormouse Conference at Reading University lived up to its promise and I found it quite riveting. Denise kindly offered to write it up in full for you, but one or two talks were outstanding. First of all is the work of Goedele Verbeylen - to get a flavour of it you should not miss our AGM where we are showing the film she made about her research into producing a 'dormouse only' trap. It was also she, I believe, who talked about using footprint tunnels. It seems that dormouse footprints are different from any other animal. Two gentlemen, one from Devon and one from northern Europe, talked about the value of roadside vegetation for dormice and its management and how it can be used to link suitable, but isolated, habitats. And finally, I never heard before that some dormice eat fungi and in Germany the favourite tree is the Rowan. There is always something more to learn.




Dormouse records from 1960-2000 (shown as red squares, records from 2000-2015 (shown as blue squares.

We are already looking at new sites for our surveys next year. With the help of David Lee's excellent mapping skills we now have a map which shows records of dormice in Herefordshire pre- and post- the year 2000. To the north west of Hereford between the A480 and the A4110 is an area of woodland (circled in pink) which has had dormouse records in the past, but none that we know of recently. If any of you know the area and can recommend places to survey, or in particular know the land owners whom we could approach, any information would be much appreciated.

## National Dormouse Conference Review by Denise Foster

The dormouse conference hosted by the People's Trust for Endangered Species took place at the beginning of September at Reading University. The conference took place over 2 days with a variety of excellent speakers. Whilst

the first day was directed more towards ecological consultants and the second towards dormouse volunteers both days were equally interesting.

There was a good turn-out at the 2-day National Dormouse Conference.

Day 1: Ian White, the Dormouse Officer for PTES, opened the conference with a short presentation on why dormice are important, including a potted history of the early research pioneered by Pat Morris and Paul Bright, who raised the profile of the dormouse in the 1980s.

This was followed by the fascinating research work of Goedele Verbeylen (Natuurpunt) on Comparing Methods to Study and Monitor the Population of Dormice at her two study sites (railway verges and forests); the only dormouse sites remaining in Flanders. The dormouse is critically endangered in Belgium and this study looked at population parameters, habitat use and how to improve habitat. All dormice were captured, marked using PIT tags and recaptured at dormouse boxes, nest tubes and live trapping sessions, where some animals were radio-tagged to determine their movements. Over 3 years, hair samples were taken to determine whether the two populations were genetically identical and whether is it important to connect them to prevent inbreeding. A total of six devices were installed on nest boxes to read the microchips (PIT tags) as the dormice entered and left the boxes. However, Goedele's team found that dormice used tubes more often than boxes, perhaps because they prefer smaller spaces to nest in.

In 2012, live trapping was introduced but only 3% of the dormouse population was caught, along with other rodents. However, after a great deal of research into ways of excluding other animals the success rate was increased to 30%. A film explaining how this was achieved will be shown at this year's HMG AGM.

Results from Goedele's study included one female recorded 125 times building a nest, but as soon as she gave birth, she disappeared for a number of days, concerning the researchers, but she eventually returned to the nest to tend to her young. One female had a total of 11 nest sites; nest sites can be used by many different dormice. Goedele found that juveniles dispersed an average of 2.1km with a few going further afield. Dispersal also saw dormice routinely crossing open ground and a bridge, the railway being 19m wide that included the sidings.

Goedele then experimented on minimising the entrance hole of boxes to exclude birds such as blue tits and rodents. An entrance hole of 15mm was the minimum size that dormice preferred. There were some interesting discoveries about box use where inclement weather forced dormice into boxes, adults and sub-adults used boxes more so in autumn and adults used both tubes and boxes in the spring. Wood mice deterred dormice from using both tubes and boxes. The first litter was recorded in May and the last in September with evidence that young of the year reproduced the same year they were born. Male juveniles appeared to be sexually active earlier than the females.

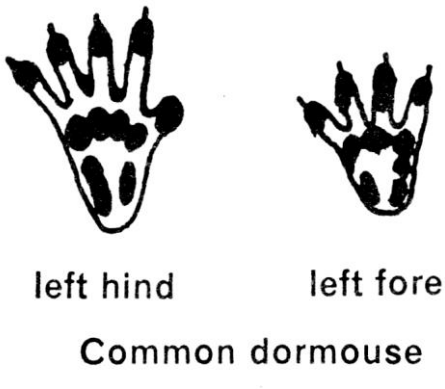
One radio-tracked male dormouse used a variety of nest sites including used songbird nests, squirrel drays, ivy and tree hollows. One male used 11 different nest sites including dormouse boxes, tubes, a wren nest, hollow, ivy (high up in tree, a hollow branch, and an area low in a coppiced ash tree. Six females were radio-tracked for one day in the spring and they were found low in brambles, in clematis 1.5 metres high, and elder branches were regularly used.

Tom Gray, a Senior Ecological Consultant, talked about using trail cameras as a surveying tool for both impact assessments and conservation. Mills et al (2016) demonstrated that feeding stations can be used to lure dormice to a particular location, from which trail cameras can then be used. Are trail cameras reliable enough to detect dormice presence and are they an effective alternative to using nest tubes for

surveyors? Traditional surveys are costly, time consuming and have low detection rates!

In Tom's study, trail cameras were set up in several different woodlands in the SW and SE of England with known dormouse presence and dormice were detected at all six sites, with detection achieved much faster than using nest tubes. Four cameras were installed per site 20-40m apart at 1.5-2m high. Bushnell cameras proved to the most reliable camera, particularly the Natureview HD Cam with LiveView (around £240.00) other cameras were not sensitive enough! However, two cameras were stolen along with the valuable data, so theft is an issue! Tom found that cameras need to be at a site for at least a month before detection and up to 90 days to detect dormice for consultancy purposes, which is far too long! Tom's time was spend refilling feeders (monthly), uploading data from memory cards, changing batteries and checking whether cameras had not been stolen. In 2 years, 80,000 photos were taken so there is also a cost element in sifting through lots of false triggers!

Simone Bullion, Senior Conservation Advisor and Consultancy Manager at Suffolk Wildlife Trust, talked about surveying for hazel dormice in a fragmented landscape. Nut and nest searches can be done anytime of the year but nest searches are far easier when carried out in the autumn months when vegetation has died down making nests much more visible, particularly in bramble cover. Simone thought that using nest boxes as a survey tool can be quite cumbersome to transport but nest tubes are much lighter and portable. Out of 35 sites Simone surveyed, 5 sites took two years to detect dormice and 15% of the nests were on the woodland edge. Scrub was considered a particularly important habitat for dormice as they found an average of 8 nests per site at 5 scrubland sites compared with 2.5 nests per site at 5 unmanaged ancient woodland sites. A burst of activity during October and November was recorded, which may be indicative of global warming. However, doubling the number of tubes does not double the number of animals and there are flaws in the current survey methods. Footprint detection was also trialled. 8 out of 10 footprint traps recorded dormice in comparison with only one nest found in 50 tubes so this could be a useful survey method. Foot prints for dormice are unique as they have three distinctive triangular metacarpal pads presumably because of their arboreal behaviour.




Taken from Mammals of Britain their Track and Signs (2nd Edition)

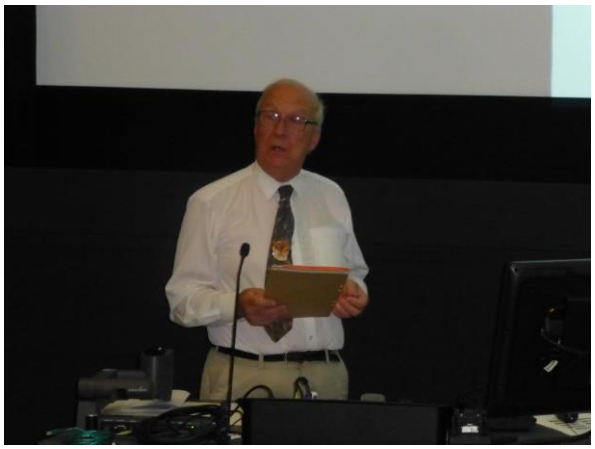
The hind foot of a hazel dormouse

Ian White returned to the stage and talked about arboreal bridges - from simple ropes across highways that were trialled in 1994 to the £22 million green bridge built in 2005 spanning the A21 at Scotney Castle in Kent. The green bridge has been used by at least 7 species, including dormice, which have also been found to breed on the bridge. Ian talked about a design that has worked very well for Japanese dormice and PTES is currently been trialling this design on the Isle of Wight. Ian reported that it was used by dormice within hours of completion and dormice are continuing to use it in small numbers.

Leonardo Gubert, Senior Ecologist for Kier Highways in Devon and Cornwall, talked about his work with Dormice and Roads. It is commonly known that roads fragment the landscape and are responsible for habitat loss and pollution. However, if managed appropriately they can increase biodiversity!

Road verges connect landscapes, are relatively undisturbed and are now some of the best quality habitats in the country. There are 178,000 ha of road verges in England and Wales and 30,000 ha of them are along motorways and trunk roads. With approximately 40 million trees and shrubs, consisting of broadleaves such as ash, oak and hazel, it is now known that roadside vegetation can provide important permanent habitat for dormice. Summer nests have been found in hawthorn, blackthorn and bramble next to live lanes 1-3 metres above ground and in nest boxes and tubes, along road verges which are visible from the road during autumn. Dormice use all sorts of materials in their nest including plastic, card and newspaper. However, roads need management and work has to be done quickly and at night. In the winter months, hibernation nests have been observed with some being in very open ground on road verges.

Bjorn Schulz from Germany continued the theme about roads and the remaining populations of dormouse in Northern Germany which include black coloured animals. Bjorn said that dormice that live along the roadside have learnt to cross motorways safely. This was discovered during a radio-tracking project where one male crossed the road 5 times! A continuing message of hedgerows management was emphasised, and Bjorn believes that increasing connectivity could double the population of dormice. Hedgerows appear to be more important than forests in Germany, so if good habitat is managed properly around barriers such as roads, then investment can be channelled towards crossing structures so that dormice can cross the road safely.



Pat Morris chaired the second day at the conference

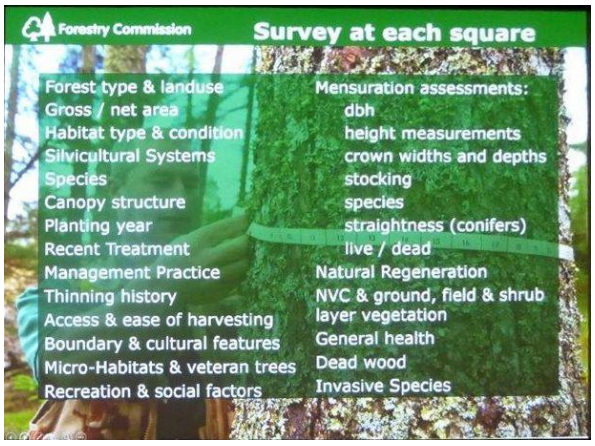
Day 2: Pat Morris chaired the second day of presentations which was aimed at Conservation Dormouse Workers. Pat gave a presentation about his work with dormice which started in the early 1980s. He talked about getting people out on the Great Nut Hunt, radio-tracking with Paul Bright and dormouse box introductions and about raising public awareness, as there was limited information about dormice way back then. Now in 2015 we have 400 NDMP sites and 17,500 boxes, with a total of 100,000 records of box visits; the NDMP has bought together a network of people with a common interest.

Carved Wooden hazelnuts showing the different nibble patterns on display at the conference

Ben Kite, Ecological Consultant at EPR, talked about using historic data when finding dormice. Hazel Dormice are often found in species-poor arboreal habitats, conifer plantations, garden hedgerows and other recent woodlands. Most of these “recent” habitat areas may have a hidden past or context so they should not be overlooked when it comes to hazel dormice. Conifer plantations are in fact “Plantations on Ancient Woodland Sites (PAWS)”, which often have a semi-natural edge and boundary. Old habitat segments may still be mixed in or around these woodlands. At Titchfield there is a small strip of woodland that still exists in an urban area. Historically, this was once a common with pasture, scrub, and woodland areas and historic evidence of a pest house (quarantine for diseased people) from 1800s to 1826. This small strip of woodland site still supports a relic population of dormice, so looking at the history of a site can often predict whether dormouse may still be present.

Ben Ditchburn from the Forestry Commission described the National Forest Inventory and the Forestry Commission’s “Forester GIS” recording system. This enables the Forestry Commission to record and plan most of is land ownership activities including inventory, woodland planning

and conservation systems. Ben gave an overview of how the National Forest Inventory works and what information it can provide, such as annual mapping of all British woodlands and a detailed five-year-cycle fieldwork programme sampling woodland from the ground. This provides data on the extent, structure, conditions and sustainability of woodlands for dormice habitat and how they change over time. This is also used in informing policy and operations in dormouse management. In 5 years, 25,000 stands and 521,000 individual trees have been mapped. Sampling programmes are carried out on hectare square plots in which vertical structure is measured, including seedlings and open spaces. Ben explained that most broadleaved trees in the UK are less than 40 years old because most of our woodlands were stripped of wood during World War II. Ben predicted that the Forestry Commission will be ramping up timber mass over the next 50 years which will create much darker woodlands with very little understorey. There will also be more broadleaved cover than ever before. Conversely increasing harvesting of softwood will lead to a decrease in conifer cover. For more information about the Forestry Commission inventory go to **www.forestry.gov.uk/inventory**.



Forestry Commission Surveying Checklist

Continuing the Forestry theme, Roger Trout who worked for MAFF and then Forestry Commission for rare mammals, talked about the impact of conifer management on hazel dormouse. Roger explained that forestry is carried out using best practice rather than under licence from Natural England. When management is scheduled it has to be economically viable as hiring heavy machinery is costly so there needs to be a good return of timber to cover that cost and make a profit. There is never a good time to carry out forestry work but autumn/winter is the best time. However, in the long term, any management will be better for dormice than no management at all. During a wide scale study Roger found that the rack and thin method of forestry did not benefit dormice, because this method does not give any additional light to promote understorey growth, unlike clear felling, which will result in larger number of dormice due to regeneration. Nests found were often made from conifer needles and in 0.9 hectare ranges there were a number of nests per site. These were used by different animals and they frequently moved between nest sites and boxes, so if you find dormice repeatedly in the same box they are likely to be different animals. If some nests are destroyed during management activities there will be many others. Dormice may be discouraged from using some boxes during regeneration so you may see some apparent declines.

Nida Al Fulaij (PTES Grants Manger) talked about the Dormouse Reintroduction Programme, which first took place in Cambridgeshire in 1993. Since then there have been 26 reintroductions at 22 sites in 12 counties in the UK with 864 animals being released. The scarceness of dormouse was first noticed in 1885 by G.T Rope who published an article in The Zoologist 'On the range of the dormouse in England and Wales'. This showed that dormice were once considered to be 'common' in many southern counties and known localities were recorded in many of midland and northern counties and in Wales. This general dormouse distribution in the early 1900's was supported by other naturalists. However, by 1945, after WWII, the dormouse was disappearing. Nowadays, dormice seemed to be relatively common in the south-west and east of England and are present but considered rare in the West Midlands. Nida explained that all animals that are reintroduced go through a strict health check and are quarantined prior to release, so they do not introduce any zoonotic diseases into their new areas. Releases comprise 40 animals (with equal numbers of males and females). They are placed in cages at the release site to acclimatise and are eventually released. Boxes are installed and routinely monitored in areas of re-introductions.

Fraser Coombe, a PhD researcher at Manchester University, is researching the similarity of the UK

dormouse to its continental cousins and to assess whether there are any regional genetic variations around the UK since dormouse populations have generally become fragmented reducing gene flow. Fraser found 5 genetic groups in various areas within Europe, originating from Italy, but UK dormice were considered to be a separate population.

Is climate change contributing to the decline of the dormouse? This was the subject of the next talk by Cecily Goodwin of Exeter University. There has been a 70% decline in the dormouse population on NDMP sites between 1993 and 2014. Cecily found that temperature affects dormice numbers, warmer springs and summers lead to more dormice later in the year and warmer winters tend to result in fewer dormice the following year. The NDMP - an unique database - may hold the answers to the question of climate change. Volunteers were asked to record torpid animal data and the time of the day the boxes are checked.

Ian White was the last talk of the conference where he talked about the state of Britain's Dormice in 2016. The situation remains precarious and if populations continue to decline their future is uncertain. Surprisingly Herefordshire is shown as an island where dormice are said to be "common" – however we believe that this may be more representative of the high level of dormouse monitoring in our county! The report can be found at:
**http://tinyurl.com/PTES-dormouse-state**

Pat Morris closed the conference with some key messages particularly about dormice still in decline. The importance of connectivity to link up populations, particularly via hedgerows, was a message repeated by most speakers. Also, a lack of habitat management continues to affect numbers of dormice –a coppicing policy needs to be in place at dormouse sites. More research is needed about the use of conifer plantations by dormice to determine what they are eating!

The dormouse conference is held every 3 years. This year's event was excellent value for money and those who attended came away with much new found knowledge.

## HMG CONTACTS

**Chairman** - Dave Smith
Email: davetreesmith@aol.co.uk

**Secretary** - Mike Bailey
Email: mikebailey34@googlemail.com

**Treasurer** - Mike Coleman
Email: mike.hereford@btinternet.com

**Acting Membership Secretary -** Mike Coleman
Email: mike.hereford@btinternet.com

**Committee Member (Bat Co-ordinator and Newsletter Editor)** - Denise Foster
Email: sweetchildofmine@btinternet.com

**Committee Member** - David Lee
**Email:** davidlee@thespis.eclipse.co.uk

**Committee Member (County Mammal Recorder) -** Joe Allsopp
Email: hfdmammalrecords@gmail.com

**Co-opted Committee Member (Dormouse Co-ordinator) -** Ann Bowker
Email: ann.bowker@clara.co.uk

**Co-opted Committee Member (Wildlife and Bridges Co-ordinator) -** Nick Underhill-Day
Email: nunderhillday@gmail.com

**HMG Main Email**:
Email: hmg2013@btinternet.com