



Autumn/Winter 2016

# Swanton Novers Woodland Bat Project Autumn/Winter Newsletter

*Discovering the connection between natural heritage and cultural influences in Swanton Novers woodland*

Now the clocks have gone back and winter is fast approaching, bats at Swanton Novers NNR are starting to think about hibernating. With only a few insects flying around it makes little sense to use up valuable energy flying around for very little gain. So from late November to March, bats will go into hibernation and sleep the cold, harsh winter months away. This means at HQ we will be winding down on our surveying. We will keep putting the static detectors out to see if Swanton's bats continue to use the interior of the woodland during the milder winter days, and we will be putting camera traps out to spy on the woodland inhabitants. Winter will also be a time to visit schools and interested youth groups to give bat talks and provide information about the project. In addition, we will be analysing data collected from this year's surveys with help from our volunteers and preparing for next year.



Wild about Norfolk © Sonia Reveley

## What has been happening since the project started?

Since April, twenty-four transect surveys have been carried out with help from our volunteers and we have deployed the static detectors eleven times, giving us one hundred and ten sets of recordings to analyse.

In total, twenty one volunteers have signed up to the project, some from the local community and some from further afield. Thanks to their enthusiasm and commitment, the volunteers have contributed four hundred and twenty hours so far to the project and have assisted with a range of activities from bat walks, transect surveys, static detector deployment and collection, trapping surveys, understorey vegetation surveys and call analysis.

To raise awareness about the project there has been a project launch, two bat walks at the National Nature Reserve (NNR), a community day event, two off-site bat walks, two call analysis training workshops and a five-minute spotlight presentation at the East of England Conference. The project team also had a stand at the Wild about Norfolk wildlife and environmental fair on October 15th which took place at Easton and Otley College, near Norwich. The event was a great opportunity for local conservation and wildlife organisations to showcase their work and educate interested parties about Norfolk's wonderful wildlife.



Hibernating bats © Anita Glover

## Plans for next year

The project will be running for another year. We have finished surveying for this year with our volunteers and will start monitoring again in April 2017. There will be a community day event at the village hall in April, a photograph competition and call analysis training workshops. There will also be some bat walks during May, (a rare opportunity to watch the serotines and noctules feeding on the emerging cockchafer beetles) and throughout the rest of the year. All events will be posted on the website ([www.bats.org.uk/swanton](http://www.bats.org.uk/swanton)) under **Events**. Information about the project progress can also be found here under **Swanton News**.



Swanton Novers National Nature Reserve in November © Sonia Reveley

## Bat spotlight— The barbastelle

The barbastelle is a medium sized bat. It has a pug shaped nose, ears that join up on top of its head and dense long black/ brown fur with white or golden tips, which gives it a frosted look.



Barbastelle © Hugh Clark

The barbastelle is a rare woodland specialist, preferring to roost in trees in the summer when forming maternity colonies. Loose bark, tree cracks, crevices and fissures are some of the tree features used as roost sites.

In the winter barbastelles have been found to hibernate behind loose tree bark and in underground structures such as caves, tunnels and mines.



Barbastelles © Daniel Hargreaves

Barbastelles are fast and agile flyers and can be seen flying close to the tree tops and vegetation when dusk creeps in. They can also forage over long distances. When echolocating barbastelles will emit two types of calls – one call can be heard at the peak frequency of 32kHz, the other is much quieter and weaker. On a detector, the calls sound like pebbles being knocked together. They feed on moths, flies and beetles.

## Blog: Volunteering for the Swanton Novers Woodland Bat Monitoring Project

Volunteers are essential for the Swanton Novers Woodland Bat Monitoring Project to grow and continue. In return, the project gives volunteers an opportunity to learn how to survey for bats, use new equipment, analyse bat calls, and carry out practical and maintenance work. All of which are essential to ensure that we continue to gather all the data needed to answer our questions. Volunteers also get an opportunity to gain access to an area of natural beauty, help protect it and raise awareness about the woodland and its inhabitants through community events, walks, talks and articles.



Swanton volunteers © Sonia Reveley

For this blog, a volunteer who has helped with the project since the beginning called Keith Fox has kindly written up a small article about his volunteering experience and why he enjoys it. Keith came to the project with some bat surveying experience already under his belt. Keen to continue with his work at the NNR, his help has been invaluable from helping new volunteers when paired up on the transect surveys to leading walks. Through the project he has learnt how to use new bat recording equipment and has assisted with the deployment of the static detectors. Here Keith describes how he first got involved with Swanton's bats.

*"I have been kept busy with volunteering work on a number of nature reserves since moving to Norfolk ten years ago, or should I say indulging my interest in natural history! One of the reserves I work on, and perhaps my favourite, is the ancient woodland that is the Swanton Novers NNR.*

*These woods have been an important part of the Norfolk landscape for hundreds of years, initially for economic reasons and latterly for their tremendous wildlife value. I have helped here with many tasks, from coppicing and growing young hazel plants to carrying out wildlife surveys.*

*Hence one day I was asked if I would like to help out with surveying bat activity in the woods.*

*It all started with walked transects through the woods, initially with an experienced bat worker, and moved on to analysing the results of the transects on my computer to identify the bat species. It moved on to positioning static detectors and analysing those results with even more software.*

*The next big step was to help with catching the bats using mist nets. With that came the chance to hold a bat in my hand and see just how tiny a pipistrelle really is. Barbastelles were tagged with radio transmitters, which lead to tracking the tagged bats around the woods and wider countryside, and the more sedentary and less exhausting locating of roosts and emergence counts.*

*I am now confident in my ability to identify the different species and have gained enough information from other colleagues and background reading to confidently lead bat walks for the 'general public'.*

*What do I enjoy about the work? Four things;*

*I love being out in the woods at night with the snuffling badgers, barking deer and roding woodcock.*

*It gives me a real buzz to think that I am helping to ensure the survival of this wonderful wooded place.*

*I feel I am making a real contribution to the knowledge about bats and how they use the woodland environment.*

*It has triggered a fascination with all aspects of the life of bats; flight, echolocation, hibernation and all the rest."*

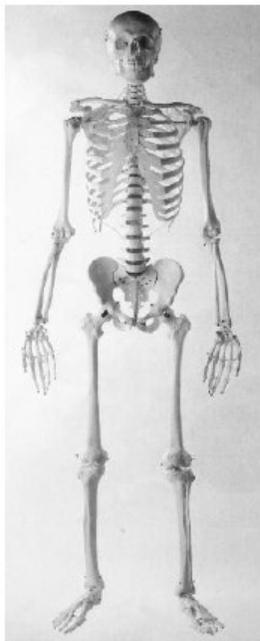
**Keith Fox, Swanton Novers Woodland Bat Project Volunteer**



Keith hoisting a microphone into the canopy © Sonia Reveley

# How do you compare to a bat?

Even though at first sight we may look completely different, we are in fact surprisingly like bats. From the tiny pipistrelle to the largest flying fox, we share many characteristics with these amazing animals. But because they fly they have adapted to their way of life in some very special ways.



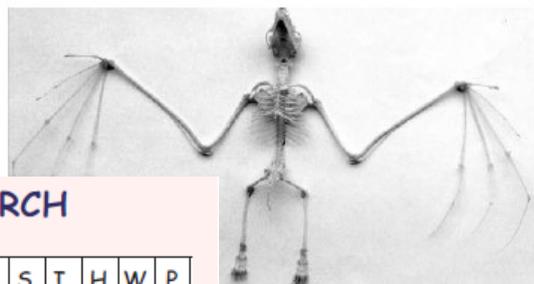
Compare these two skeletons – one of a person, the other a bat.

In what ways are they similar?

How do they differ?

Which parts of the body are most important for movement from place to place?

Look especially at the leg, arm and hand bones. How are they adapted to move in different ways?



Label these parts on the bat's body.  
*Thumb, second finger, third finger, fourth finger, forearm, toes, ear, flight membrane*

Make a drawing of yourself. How many of those same parts can you find and label on *your* picture? Which parts do we *not* have. Why not?

You need food to give you energy, just as a bat does. Flying uses so much energy that bats need much more food, for their size, than we do. Insect-eating bats can eat half their weight in one night.

*How heavy are you?  
 How heavy is one of your favourite sandwiches?  
 How many sandwiches are equal to half your weight?  
 Could you eat that many sandwiches in a day?*



© Illustrations by Tessa Lovatt-Smith

Bats, humans and most other mammals have very similar digestive systems. Food travels down to the stomach where it is broken down and goes into the intestines. Here nutrients are absorbed, but waste travels on to the anus and is passed out.

© Young Batworker/BCT

## WORD SEARCH

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© Brown long-eared bat  
 Daniel Hargreaves

Search up, down and diagonally for the names of these 14 British bats hidden in the square:  
 serotine, noctule, Leislars, brown long-eared, grey long-eared, pipistrelle, Daubenton, Natterer, Brandts, horseshoe, mouse-eared, Bechstein, barbastelle, whiskered.



## Where do bats go in the winter?

With the cold weather heading our way, bats will be preparing to hibernate.



Cave © Sonia Reveley

Hibernation is when an animal enters a state of deep sleep, a period of inactivity known as torpor. This happens when winter approaches and food becomes scarce. And rather than losing vital energy chasing after a few morsels of food, some mammals like bats will find a warm, safe shelter and curl up for a nice long sleep. But before they can hibernate, it is

important for bats to build up their fat reserves, around 20–30% of their body weight. This is done during the autumn months. This vital store of energy known as brown fat tissue will support the bats throughout the cold winter months.



Lime Kiln © Anne Youngman

To go into torpor, bats will lower their body temperature. This will decrease their heat production which is energetically expensive. This lowering of the body temperature is controlled and does not fluctuate with the surrounding temperature. Their metabolic rate, heart rate and breathing rate will slow down too.

To hibernate successfully, bats need roost sites that are cold and will remain at a steady temperature. These roost sites need to also be safe from potential predators. The roost of choice for many bats are underground structures such as caves, but they can also roost in rock crevices, hollow tree trunks, tree holes, mammal burrows and man made structures like ice houses, mines, lime kilns, cellars, tunnels and deep inside wall cavities.

If you come across structures that seem suitable for bats, please do not enter as these structures may be unsafe. Bats are protected by the law, so they should not be disturbed when hibernating. Only those with a licence can enter a hibernation site to carry out surveys.



Mine shaft © Shirley Thompson



Tunnel © J Agate



Lime Kiln © Sonia Reveley

## Looking for a project which you can contribute to?

We are always looking for people to help us with a range of activities from bat surveys to walks and events.

So, if you are interested and would like to join our team on a journey of discovery then I (the Volunteer Coordinator) would love to hear from you and can be contacted by email at [SReveley@bats.org.uk](mailto:SReveley@bats.org.uk) or ring 07788 226528.

More information including blogs can be found at [www.bats.org.uk/swanton](http://www.bats.org.uk/swanton).

