



Hello and welcome to this year's Northumberland Bat Groups Newsletter. Always a lot going on so please come along to one of our social evenings, have a chat and see how you can get involved. Happy reading and we hope to see you soon.

### **Talks and social gatherings**

We are planning on holding social evenings on the third Thursday of each month, starting next week and finishing in April. This will give members and new-comers a chance to socialise, find out about any bat activities that are being planned and get updates on current projects. Part of the evening will be either a short talk on a bat related topic or a workshop style session. The dates for your diary are:

**Thursday, 16<sup>th</sup> November at 7pm** – Meet at Great North Museum: Hancock for briefing of parti-coloured bat "hunt"! We are then planning to visit a couple of tall buildings- **see article on page 2**. Bring a bat detector, if you have one.

Thursday 14<sup>th</sup> December – Christmas social (earlier than the 3<sup>rd</sup> Thursday due to closeness to Xmas)

Thursday 18<sup>th</sup> January 2018

Thursday 15<sup>th</sup> February 2018

Thursday 15<sup>th</sup> March 2018 (plus Annual General Meeting)

Thursday 19<sup>th</sup> April 2018

All talks will be held in the NHSN Council Room in the Great North Museum: Hancock and will start at 7pm with the exception of the Christmas Social – venue to be arranged.

### **Membership of Northumberland Bat Group**

Reminder about joining via website/or by email – you are not a member of Northumberland Bat Group if you are just on Facebook group. Name, address, telephone number and email address are required. There is no cost, but the Bat Group needs the information for insurance purposes to cover members when on bat group events.

## **Wanted: Song flighting parti-coloured bats**

Parti-coloured bats (*Vesperilio murinus*) do it differently from other bats, at least as far as we know. We are talking here about song flighting! Parti-coloured bats performing the song flight are very rare in the Netherlands (and unknown in the UK), or at least seem to be very rare there. So far, there has only been one record of a song flighting male, but there could be many more (and they may be here in the UK as we have odd records of vagrant individuals). The autumn is the best time to go and look for them, and everybody can help with this. In this article we explain what to look for.

### **Song flights of bats**

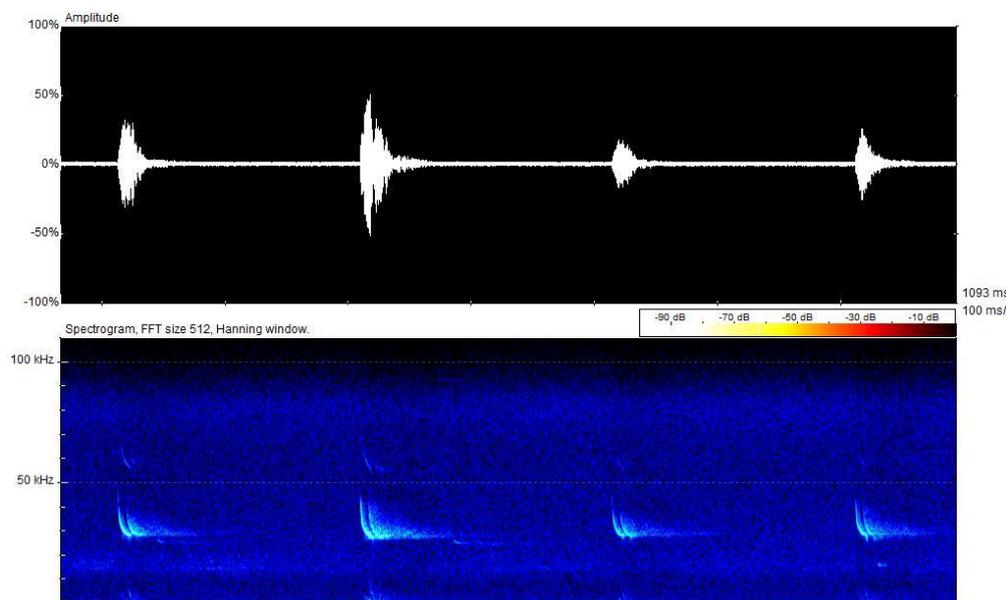
Several species of bat, such as common pipistrelle, Nathusius' pipistrelle, and the noctule, perform their song flights in August and September, and if the weather is good even into October. The males occupy territories which are defended and made obvious to females, by loud calling. In some ways this is similar to the territory of breeding birds. Pipistrelles defend their song flight territories against other males. Somewhere in the area their actual mating roost is situated and mating takes place. Nathusius' pipistrelles and noctules defend a specific roost, the mating roost, in a tree or a building. Sometimes several individuals may be found in different splits in one tree. In this case there seem to be two conflicting interests. On the one hand the males are concentrating themselves in certain traditional places, perhaps so that they are more noticeable or more well-known to females. On the other hand, they defend their area against competition with other males. However the system works, for those of us interested in surveying for bats it is of course useful that they make such a loud noise in the breeding season.

### **Song flights of parti-coloured bats**

The parti-coloured bat is also a song flighting bat, which has its own version of the song flight. Sometimes the sound can be heard in August or September. The most intensive period however is much later in the year: as far as we know, from the end of October until into December. In towns such as Uppsala and Kiev, males can be found song flighting when

**Northumberland Bat Group Newsletter**  
**AUTUMN 2017**

the snow is 2 m thick and the temperature is -10°C. In Copenhagen you might be walking through the centre of the town, wrapped up warm, in a big crowd of people shopping for Christmas presents, while above you the air is full of song flying parti-coloured bats. The peak frequency of the song flight call is approximately 14 kHz. This is only slightly higher than the song of a firecrest. Without a bat detector, the sound is a high "zing" which is repeated approximately 4 or five times per second in a continuous rhythm "...zing....zing....zing....zing...." If there are many males song flying, the air is filled with a zooming sound, similar to the sound made by cicadas in southern Europe, but at a higher frequency. If you listen with your bat detector set to 14 kHz, it sounds like "pwooit...pwooit...pwooit". One individual call is actually made of several syllables. The "pwooit" is preceded by a series of very short pulses which sound like "trrrrrr". This trill can be heard in the background of the "pwooit" sounds.



The males often fly in front of a flat object which reflects sound. In built-up areas, for example, they song flight in front of south-facing sides of tall buildings, such as blocks of flats, cathedrals, castles and churches. In nature they use south-facing cliffs. Even though they do song flight at temperatures below zero, they probably search for places where the midday sun has produced slightly higher temperatures. But sometimes you also find them song flying above a small village in the mountains. The puzzle is far from complete.

Song-fighting parti-coloured bats are mostly found in northern and eastern Europe, but they also occur in central and southern Germany. In the Netherlands one song fighting animal was heard in 1992 near a lighthouse on the coast on the 'Maasvlakte'.

Since then no more records have been made. At the same time the number of records of parti-coloured bats found in or near buildings in the Netherlands is increasing. This, in combination with the finding of nursery colonies near Utrecht and Groningen, suggests that an increase may be occurring in the Netherlands. It is noticeable that the animals found near buildings are often found in late autumn, and near tall buildings. The question is: do they not song flight in the Netherlands, or do we stop listening and stop using our bat detectors from October?

### **Searching for song-fighting particoloured bats**

Let's use the sound made by the males during song fighting in a positive way, and search for song fighting particoloured bats. Dust off your bat detector, and go out from November to the first half of December early in the evening, to listen on the southern side of tall buildings. Do it especially after relatively warm and dry afternoons. Stay at each building for about a quarter of an hour. The more buildings can be surveyed, the higher the chance that we will find a song fighting male particoloured bat. At buildings where you can listen easily, because they are close to you, or you go past them on your way to the pub, or whatever, it is certainly useful to listen repeatedly. If you think you have heard something, try to make a recording. [Send your recording to us](#). We will then listen, and possibly send an experienced person and/or somebody with a time expansion detector along to get more certainty.

### **With or without detector**

The calls are also audible without a detector. Because our ears have a large range, and compared to a detector are quite sensitive, sometimes it is easier to hear the sound without a detector. The problem is that you must be aware of what you hear. 14kHz is much higher than most of the sounds we hear, and many people do hear it, but don't perceive it. Being certain that it is a bat, and possibly a song fighting particoloured bat, is easier with the detector, particularly if you have never heard the sound

before. Swap between listening with a detector and listening without detector. Once you have heard the sound once and you know it, you will use your ear to search more than you will use your detector.

We assume that the phenomenon of song flighting parti-coloured bats is definitely taking place in the Netherlands, but it may be very rare (and even rarer here in the UK where we only have vagrant records of the species). It is therefore important that many people try to hear these calls.

Herman Limpens and Eric Jansen, Dutch Mammal Society.

(Translated by Nancy Jennings)

### **Brinkburn Priory.**

Brinkburn Priory is a 12th church owned and managed by English Heritage. This site is known to support maternity roosts of Daubenton's bats, Natterer's bat and soprano pipistrelle. Northumberland bat group surveyed the church in the 1980s, 2012 and 2015. Last year we resurveyed the site in August. This is always a popular bat group night out in a fantastic setting with the river Coquet and woodland nearby. There is always a good chance to count bats out of their roost. We had enough surveyors to surround the church and a couple of teams watched the adjacent Manor House too.

The bats did not disappoint; soprano pipistrelle were the first to appear with around 80 bats counted out along with five common pipistrelle emerging from the roof. It wasn't long before the Myotis species bats started to emerge too; they use the same exit points as the soprano pipistrelles, making counting very difficult! In all around 85 Myotis species bats were recorded with sonograms suggesting both Daubenton's bat and Natterer's bat were present, although no attempt was made to try to count these species individually. Two brown long-eared bats were seen to emerge from the roof line near to the end of the survey.

Once the bats emerge many of them forage over the Coquet and we got good views of bats feeding low over the water while noctule were feeding over the grounds and the river, entertaining us with spectacular dives and loud echolocation calls.

**Tina Wiffen**

**Adits, the surveys continue....**

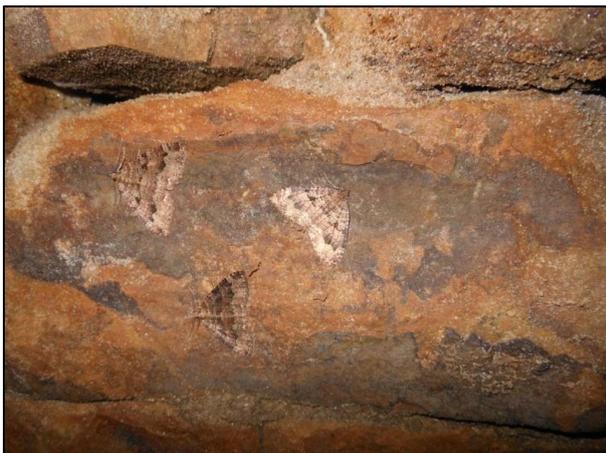
We have now been surveying adits for four winters; we carried out six full days survey last winter with nineteen different surveyors from two bat groups. Ten sites are known to support bats during the hibernation period with another adit being used by bats in March. The survey days are open to members of Northumberland and Cumberland bat groups and all of our known hibernacula are registered as part of the Bat Conservation Trust's National Bat Monitoring Programme.

The winter of 2015/16 was mild and as we only found eight bats during the whole survey period we concluded that bats did not use these sites in mild winters; however, last winter was mild too and we found bats in more adits than ever before.

Nine bats were found in December, with five bats recorded in our highest adit, at 600m asl, three Daubenton's bats and two brown long-eared bats (see right). Bats were using a variety of roost locations, some were hard to find deep in crevices and some were roosting openly against the shale cut sections of the tunnels.



Herald moth numbers were high too, with 53 and 28 being counted in two adits, Herald is one of the few moths that overwinters as an adult and is usually found in cellars, sheds and underground structures. Twenty six Tissue (see below), another hibernating moth, were recorded in five sites, four sites were new locations for this moth and all previous records had been of singles, so finding 12 in one adit was a record! Tissue is a locally



scare moth, we recorded the first one for north Cumbria in over 30 years in February 2015.

Eight bats were recorded during the two January surveys. Three were in the same locations as December and were assumed to be the same individual and in two cases, a bat of the same species was recorded near to where the same species had been

seen in December, the same bat moving or a different individual?

Even in a mild winter I managed to pick the snowy days for the surveys. After an hour long walk up in snow our intrepid team enter the adit, at least it was out of the wind in there!



In February fourteen bats were found, one of our highest counts. One of these, a Natterer's bat, had first been seen in a crevice in December, was still present in January but was absent in February, only to be back in the same crevice again three days later. Some of the bats were easier to find than others, this brown long-eared bats was using a concrete section of the adit and was hanging out in the open!

This year data loggers have been used to record temperatures where bats have been found roosting and at set points within selected adits. The preliminary data is intriguing; one adit shows a much greater temperature fluctuation than expected, another reaches a stable state within 90m of the entrance. Anabat detectors are out in these adits to monitor the level of bat activity in spring and to record when the bats leave these roosts for the summer. In one adit bats are already active but still within the roost but at the other there has been no flight activity recorded so far.

Thank you to everyone who has come along and helped out, and especially to Cumberland and South Cumbria bat groups for the loan of their bat detectors, it is greatly appreciated! I hope you have enjoyed the surveys as much as I have, they are hard work but its good fun and finding bats always makes it worthwhile.

**Tina Wiffen**

## **Gibside – what 11 years of bat surveys has taught us.**

Gibside is a busy National Trust estate near Gateshead. It is a 720 acre Georgian designed landscape including gardens, wildlife habitats, commercial forestry and historic buildings, and of course the collection of buildings and structures need regular maintenance and conservation work.

We knew that there were bats flying around the estate at night, feeding and we knew there were lots of good feeding habitats nearby – ponds, meadows, woodland rides and the Derwent River. It was highly likely that bats would be using some of the buildings around the site for roosting, but we didn't know which buildings, which species of bats or how many were roosting in our buildings and when.

The idea to carry out regular emergence surveys started because we wanted to be proactive and find out how bats were using the buildings so we could be better prepared when the need for future building work arose.

Emergence surveys began in 2006 when we recruited a team of volunteer bat surveyors from our existing National Trust volunteers, local bat group members and some interested visitors. The volunteer team attended a training session led by bat ecologist Tina Wiffen covering basic bat ecology, British and North East species, different types of roosts and use of a bat detector.

A set of bat detectors was bought for the volunteer surveyors to use, and since then we have added to our equipment with funds made from sales of firewood and event tickets, and from a project funded by County Durham Environmental Trust.

That summer each of the estate's buildings was surveyed twice, once between May and June, and again between July and August. It was brilliant to have a big team of volunteers to survey the buildings, because some of the buildings are quite complicated structures and lots of people were needed to watch each part of the building. The results showed small numbers of bats from every building, even from the toilet block. No maternity roosts were identified, but we had records of where bats were emerging from the buildings, the species and numbers that were roosting, and information about the foraging activity in different areas around Gibside.

These surveys continued over the years producing similar results and building up a picture of how bats were using the buildings at Gibside. In 2011 we reduced the number of emergence surveys to one survey of each building per year between May and June, and then the volunteers took on

a NBMP field survey in July and two waterway surveys in August. Adding a variety of surveys during the summer has helped to add interest to the programme.

In our 9th survey year, 2015, our emergence survey of the stable block identified a maternity roost at one of the corners of the building. This was the first maternity roost we'd found at Gibside so it was an exciting time for our survey team. We counted 180 Soprano Pipistrelles emerging, and when they returned in 2016 we counted over 250 bats.

Continuing the surveys for so many years has really paid off. It has helped us identify changes in the way bats use the buildings and we now have a good idea of which buildings bats use to roost in. This means that when we know building work is needed we have a lot of the knowledge we need about Gibside's summer bat roosts and we can find ways to carry out the work without disturbing the bats. It has also led us to undertake other projects to find out more about the bats at Gibside, including bat box checks and ringing the bats we find, and a radio tracking project which helped to identify roosts in villages local to Gibside.

We are continuing the surveys and monitoring the maternity roost at the stables, and hoping the number of bats and our fantastic volunteer team will continue to grow.

**Helen McDonald**

### **Nathusius pipistrelle Project 2017**

#### Trapping and Tracking

There were 18 trapping sessions carried out at 10 sites in 2017: 198 bats were caught of 6 species (28 Nathusius pipistrelles - 21 males and 7 females)

#### **River Wansbeck Roost**

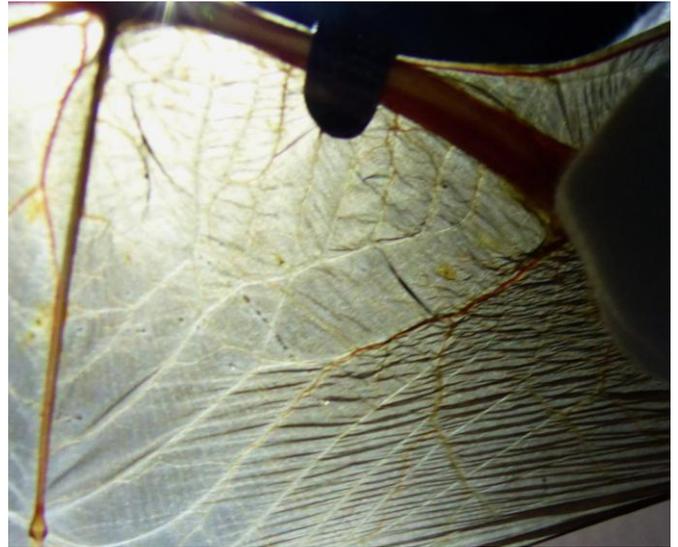
The mixed Soprano/Nathusius pipistrelle river roost in the village near Morpeth started to form during the third week of April and numbers increased to a peak of 41 Nathusius pipistrelles, which was an increase of 10-12 from 2016. This was before any pups were born. It is definitely a challenge trying to get accurate counts from a mixed species roost!

□



### **Mating Roost – Coastal village**

A static detector has been monitoring activity at the mating roost that was discovered a couple of years ago by radio tracking a post lactating female. There has been frequent flight activity with occasional male social calls during the summer and during August there was a significant increase in male advertisement calls.



### **Coast Roost**

One female caught at Ladyburn Lake, Druridge Bay Country Park on 20th May 2017 was the required condition and weight so was tagged and radio-tracked. She was in a detached flat roof garage with 5 other *Nathusius pipistrelles* but after a few days of monitoring managed to get her tag off. However 6 *Nathusius pipistrelles* were counted out of our known coast roost a couple of days later so this is possibly the same group. The numbers increased over the next 14-17 days to 13 then 24. On 26th June the adult bats emerged between 2200 and 2240 and pup contact calls could be heard during the next half hour still in the roost. From the data collected from an anabat express left in the loft near to the roost site it is likely that the pups were born around 11th June.

There is still a great deal of data to analyse, but it was useful to know from a static detector recording close to the maternity colony that the bats finally left the roost at the end of July.

As always a huge "thank you" to all the volunteers who give up their time to help out with all the above. The project will be continuing with monitoring the known roosts, surveying to find new sites where *Nathusius pipistrelles* forage, trapping and ringing *Nathusius pipistrelles* starting in the Spring next year. If you would like to get involved with the project please email me with your contact details over the winter so I can include you in the distribution list ([hazelmakepeace@aol.co.uk](mailto:hazelmakepeace@aol.co.uk))

**Hazel Makepeace**