

## In at the deep end!

New members **Steve & Frances Donovan** recount their early bat experiences...

We have always been interested in bats and have participated in lots of bat walks in various locations over the past few years, so a chance meeting Steve had in Parndon Wood (Harlow) one evening at the beginning of the year lead us to taking part in Jan Ragg's "Bat Day" at her home on 23<sup>rd</sup> March. I suppose you could say we have been thrown in at the deep end since then.



[Photo: Frances Donovan]

We have helped with surveys in Hatfield Forest and Harlow churches, looked after casualties at home, flown various species in the cage at the reserve and sat in the cold to do a roost count and not spotting one bat. We even attended the "How to lead a bat walk and give a bat talk" session at Hanningfield, where we were lucky enough to see the roost of pips pop out from under the eaves of the visitor centre.

On 29<sup>th</sup> July we picked up "Cambridge" (see photo), a baby Soprano Pipistrelle found at Queen's College. By the time we took him home he was on 3 feeds a day of milk and decapitated mealworms. He seemed to be progressing well. However, when he didn't begin to fly at the expected time, Jan realised he had injuries to both wings and he was put on antibiotics. A recent breakthrough was flying the length of our small flight cage and managing to feed himself. We are hopeful that he will be able to go back to college soon.

The low lights of our experience - our first "ambulance" collection being too badly injured to be saved and the baby we were due to look after not surviving. The highlights, however, have been the privilege of handling these wonderful little beings and releasing them back into the wild. We have learnt so much over the past few months, thanks to Jan, Graham and many others and have been able to pass on some of this to family, friends and colleagues at work, which I suppose is what it's all about - raising awareness of our nocturnal friends and how to keep them safe.

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On top of the Weald.....	Page 2
Helping Havering Landscape Project.....	Page 2
We dance at dawn - Impressions of a swarming.....	Page 3
On course in Constable Country.....	Page 5
Bat flies and mites - parasites.....	Page 6
Hibernaculum restoratum.....	Page 7
It's news about projects - it's Projects News.....	Page 8
Contacts, EBG clothing & membership form.....	Page 9

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# People Power

Graham Hart with an update on the Weald Bat Project

The Weald Bat Project has been designated a Priority Project by the Essex Bat Group Committee for 2013. The year kicked off with the first Sound Analysis Workshop in January. These are aimed primarily at those already volunteering for the Project. It allows everyone the chance to analyse their sound files in an informal and interactive group session aimed at helping people get to grips with the software and the amount of variables encountered in sound analysis. This part of the project is an important factor in building on field survey skills. It's also a good social event and a chance for bat workers to meet up and swap stories.



Following this, we set up a weekend workshop looking at assessing trees for their roost potential. The results would focus our survey effort for 2013. 25 people attended over a cold weekend in January with snow still on the ground! Bat workers are hardy souls!

The first evening detector survey of the trees we assessed in January took place on 11th April. Despite the very cold unseasonable weather, it was still attended by 10 of those hardy souls. This year we are able to loan out detectors and recorders thanks to funding by OPAL at the Natural History Museum. This is an important element of the Project. Most bat survey equipment is expensive. We want to give people the chance to use this equipment and learn more about it without having to pay out large sums immediately. It allows people new to bat surveys to get involved more quickly. It also helps extend our survey coverage!

The second detector survey in April drew interest from 17 people - the most we have ever had attend a survey at Weald! The evening was successful in that we saw lots of new faces and the return of more familiar ones. There were also more bats around to see and hear!

I gave a brief talk on the Weald Bat Project at the New Members Evening and I would like to thank all the new members who have come out to Weald since. Essex Bat Group have more active members now as a result of the New Members Evening and all our projects are benefiting as a result. Attendance on the Weald Project has increased by over 50% on previous years thanks to wider promotion, funding by OPAL and the support of members old and new, and of course the committee. I should also like to thank Essex County Council Country Parks, especially Claire Mennim, who has supported the Project from its inception, for allowing us to use their park and without whose co-operation none of this would be possible.

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## Haivering Living Landscape Project

The Haivering Wildlife Project aims to put up 80 woodcrete bat boxes at Thames Chase Forest Centre, Broadfields Farm, Upminster, starting on 3<sup>rd</sup> September on weekdays for two weeks. There will be opportunities for all to lend a hand. Bring work gloves and meet at 10am each day at Broadfields Farm, Pike Lane. This is part of our "Living Landscape" Project covering 8 miles from Berwick Ponds to Cranham Brickfields. Later in the year we will be making bat boxes, planting hedgerows and establishing a water vole sanctuary, including a board walk. If you are interested, please phone Peter West 01708630385 or e-mail peterwest501@btinternet.com

# Bat City - Dawn Swarming

Observations and Impressions at a  
Soprano Pipistrelle Maternity Roost  
by John Smart

To the south east of Norsey Wood in Billericay, there is a Soprano Pipistrelle roost in a private and conventionally constructed suburban house. The roost size is recovering from a serious weather incident in the autumn of 2012. In May that year there had been an emergent count of 566. The emergent count around the time of the two July 2013 visits came in around the 400 mark. Close by the gable end, where the roost has access, there are tall mature ash, oak, Norway maple and hornbeam trees with an understorey of elderberry, laurel, fragrant honeysuckle and nettles. The area about the houses and their gardens that adjoin Norsey Wood is well wooded.

On both visits there were a few bats about the gable end roost site as I arrived at 4am (twilight began at 4.07am and 4.19am respectively). From then on the 'swarming' began to build up to a swirling mass and peaked about half an hour later. All the time, several bats, in the gloom, were approaching the roof tiles and the soffit board and gaining access via the small gaps presented. The main body of the 'swarming' took some fifty minutes to enter. The maths works out as a bat entering the roost every 7.5 seconds on average.

Whatever other aspects that 'dawn swarming' serves, it must also fulfil the need to queue as the access is usually restricted. Time is required for them all to funnel in. Behaviourally, this is a very different type of concentration as compared to the smoke-like murmuration of starlings above a reedbed or the orchestrated convolutions of waders over an incoming tidal mudflat. In these dense clouds individuals are co-ordinated, unlike the 'swarming' of bats.

There appeared to be no common flow to the 'swarming'. A speedy, apparently random, dense whirl of individuals on varying and different avoidant flight paths demonstrating to the observer the efficiency of their echolocation attributes. Each bat, at any point in time, is responding and missing its nearest fellows. Some even approached each other diametrically opposed and jinked to miss. All this successful avoidant navigation and only a foot or so between any individual. Some bats, when just past the point of entrance, briefly glided away; as if they had intended to enter. They were creating and negotiating their own 'clutter' as it were. However, I only ever saw one glancing collision which was also audible. A tawny owl called in the middle distance.

The structure of the 'swarming' appeared to be a dense concentration 'nucleus' of bats swirling and passing by the roost entrance points with a less dense 'outer zone' of circulating bats. The main body of the concentration was below the roof's ridge. Members in the 'outer zone' presumably 'waiting in the wings' to approach and join the 'nucleus' as it was progressively reduced by those that were entering the roost. Perhaps the close proximity of the trees and shrubs had the effect of concentrating the 'swarming' as the airspace was limited.

I wondered if there was a hierarchy at work within the 'swarming' involving the mature female bats, breeders and non-breeders and the young flying recruits (both male and female). The pups now on the wing and still learning the skills required for pinpoint accuracy and timing presumably.

The emergent numbers graph, from several previous years, shows a sharp decline in the maternity roost's numbers towards the end of July/early August. With the young on the wing, the roost has begun to break up.

At the peak of the activity, one could hear the soft rush of wings and the pitter-patter of droppings falling onto the foliage close by. A small glass lean-to below the roost bore witness to the accumulative rain of droppings over the duration of the roost. Sometimes a suicidal insect would drift across the body of the 'swarm', buffeted by the turbulence, until 'vanishing'.

As the light improved I could see better the point at which individual bats alighted and disappeared through the narrow openings. Some landed on a gable end roof tile (with a 'bat slot') and crawled through. Others landed briefly on the brickwork face just below the soffit board, a little way down from the apex, before immediately crawling through the gap. Some reminded me of an aircraft manoeuvre where they practice 'touch-and-go' landings and take-offs. Could this be the unsure young recruits rehearsing/honing a vital skill?

The 'Magenta Bat5' bat detector was stressed out with a constant rapid crackle of the massed calls. Only when towards the end of the event could individual calls be discerned. For about ten minutes, after the main body of the 'swarming' had entered the roost, a few bats foraged only just above the understorey between the trees and the roost site as if 'snacking' at the very last opportunity. Then, as dawn was well advanced, these individuals also entered the roost. By that time, an hour had passed.

And high above, the occasional Black-headed Gull and Carrion Crow were criss-crossing the sky as a night shift had drifted into a day shift, the nocturnal into the diurnal.

I had occasionally set the bat detector to 45kHz to see if a Common Pipistrelle was present; but apart from a constant background hiss, there was no positive response. But set between 54kHz to 61kHz the heterodyne bat detector became overwhelmed.

Reading the literature, 'Dawn Swarming' and 'Autumn Swarming' are two distinct phenomena. The latter usually occurring at cave entrances where access is not restricted. This is seen as the bats own assessment of its society and presents mating opportunities (Cornes & Altringham)

Slow motion night vision video would be useful to determine other observations just too quick for the human eye to detect and add further behavioural insights.

As per Swifts colonies, the location of a bat roost, in all their various forms, can remain anonymous even to the experienced field worker. Shrewd detective work is required to locate them. One field worker ventured the opinion that discovering one is equivalent to the 'Holy Grail' of bat fieldcraft. This is a double-edged sword with the respect that they are normally hidden away from prying eyes and those with mischievous intent but can then lead to disaster when building work commences with scant regard as to what is being disturbed. Swift nesting niches are regularly blocked up by new eaves PVC fascia and soffit boards, sometimes innocently and sometimes otherwise. Bats suffer a similar fate due to such refurbishments.

There has been a wildlife price of dispossession to pay across the country for the various recent governmental insulation/refurbishment initiatives. Coupled with the widespread disconnection from Natural History concerns by the many, that leads to ignorance and apathy where the significance of wildlife importance and its decline fails to register.

The 'Guardian of the Roost' tells me that when the early sun breaks through, looking vertically above, the wings demonstrate their translucency. A very engaging and intriguing sight.

Many thanks to David for giving me the opportunity to visit his house and its bat roost in the early hours and providing me with the yearly data of the regular emergence counts. It is one of those experiences that directly connects one to the Natural World. I had not experienced this phenomena before, so I arrived in the dark and left in the light (in more ways than one). A lone vigil and a non-interventionist visit. A bat 'Dawn Swarming' is a visual wonder. So much hyperactive bat-traffic in such a confined airspace.

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# A weekend away...with bats

**Tim & Sarah Sapsford** on a recent bat course in Constable Country

Once a year the FSC at Flatford Mill hold a course on 'Bat Identification, Ecology and Conservation'. This year the course was run for the first time by Richard Crompton, after the retirement of Brian and Patty Briggs, who have run the course for many years.

The first evening started with a visit just over the border into Suffolk to a Tudor barn. We were blessed straight away with a Barbastelle in flight, then a short time later with a second that posed for photographs. Later in the evening a Serotine also flew around inside the Barn showing off his skills and we found a small roost of Natterer's in a wall crevice. Outside, the usual Common and Soprano Pips, and a Barn Owl, were keeping us nicely entertained, while the Noctules were flying high overhead (not a bad start to the weekend we thought).

The second day started in the class room, going through species identification with specimens in the hand and then sonographs. In the afternoon we practiced setting up mist nets and harp traps (while a Nightingale sang loudly next to us). In the evening we listened to and recorded the local bat fauna round the Mill. This started slowly but soon picked up, with lots of Pips and the odd Noctule and Myotis.

Day three we went through ecology in the classroom and listened back to our recordings from the night before. This got a bit more technical as we started to look at Anlook and the slopes of individual calls to help split the Myotis bats apart. This was a bit dry, but great if you have done plenty of analysis before, not so great if you were new to it. That night we set some mist traps and a harp trap and acoustic lure to practice capturing bats and handling them (although if you want great handling experience, join the Bat care team ). Unfortunately, with a full moon and some bad luck, the bats were having none of it and just happily flew all round the traps but not in them.

The last day started with a run through of current legislation and some practice at using radio tracking equipment. One of us would hide a radio tag and the others would use the tracker to find it. A bit like finding a needle in a hay stack with fancy toys. The final classroom session was on conservation and how what we had learnt tied into what work or volunteering we do.

As well as a beautiful setting (you can see why Constable painted here), there is a nice tea shop and an RSPB wildlife garden. It is a lovely place to stay without the bats, but with them it made a great weekend.

# Bat Parasites

Colin Edwards with an introduction to some of the species that live on bats



Picture courtesy of Colin Le Boutillier

Ever wondered what those tiny mites look like that you often find living off the bats we look after? This one was taken from a *Pipistrellus pipistrellus* last year and was passed to someone with an interest in parasitic flies that live on bats. Although mites are not his main interest he has sent a request to the Natural History Museum for an ID (no response as yet).

Here are some details as to what is being looked for in the way of flies:

Minute to medium sized (1.5-5mm), yellowish to brown, spider-like, flattened flies without wings. Halteres present. Head small, not adpressed to the thorax but, in resting position, bent backward on to thorax. Eyes and ocelli small or absent. Legs long with swollen femora and tibiae; first tarsal segment at least as long as all other tarsal segments combined.

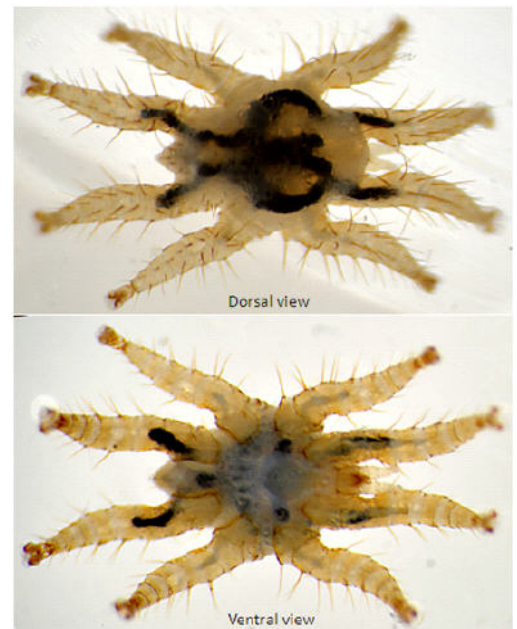
The adults are ectoparasites of bats, feeding on their blood. The larvae develop inside the abdomen of the female fly. Just prior to deposition the female leaves her bat host and glues the mature, almost pupated larva (prepupa) to a solid substrate near the resting place of the bats after which the pre-pupa fairly rapidly forms a puparium. Nycteribiidae show various degrees of host specificity, ranging from species-species associations, through associations with closely related hosts to apparent absence of any host preference.

This parasite was recovered from *Nyctalus noctula* taken into care on the 3<sup>rd</sup> of January 2013. The bat was found in Richmond Park and was in a bad way, being riddled with maggots. Eventually the decision was taken to euthenase the bat. The mite was found attached to the wing membrane and was placed into alcohol to preserve the specimen. The specimen was again photographed by Colin Le Boutillier and his photo clearly illustrates that different bat species do get targeted by different parasites.

The intention here is to send the specimen off to the Natural History Museum for definitive identification. To me the dorsal view of this one has an eerie 'deaths head' appearance.

If you do happen to find any flies or mites living on a bat you collect, please try to isolate a specimen and pass this to Colin Edwards so we can build up a view of the various types of parasites that attach themselves to our resident species. Please place them in a protective sample tube and in alcohol if you have access to it.

Happy hunting!



Picture courtesy of Colin Le Boutillier

# Restoration of a bat hibernation site in Essex

John Dobson on the successful enhancement of a hibernaculum near Tiptree [This article first appeared in *Essex Naturalist* in 2012]

This article describes the restoration of a hibernation site for bats involving Natural England, Maldon District Council, English Heritage and the author. The outcome has been the creation of a site that has already attracted four species of bats, including the nationally scarce *Barbastelle* *Barbastella barbastellus*.

The Braxted Park Estate comprises a walled estate that includes a large country house, a range of buildings that are used as wedding, office and conference venues, and rural pursuits, including a shoot and a golf course. Also located within the grounds of the estate are a large lake in the front of the house and All Saints Church, which has a pipistrelle roost. At the north western end of the lake is a Grade 2 Listed brick building, formerly referred to as an icehouse, but now considered to be a Victorian Bath House. The building was first inspected for bats in December 1987, when a single Daubenton's Bat *Myotis daubentonii* and a Brown Long-eared Bat *Plecotus auritus* were found hibernating in gaps in the brickwork. A Natterer's Bat *Myotis nattereri* was recorded in January 1988, since when small numbers of bats of the same three species have been regularly recorded hibernating in the structure. Visits during the summer have found that the building is used as a night roost by Daubenton's Bats, although bats have not been found roosting in the building during the daytime.

However, during the last twenty two years, the building has steadily deteriorated and in 2010 was considered to be extremely unsafe. Gaps in the pointing of the brickwork that formerly held bats had extended to a width of up to 30cm and, when grant funding became available, it was agreed to restore the building during the summer of 2011. In April 2010, several props were used to prevent the building's possible collapse, although access for bats was retained during this period. From April 2011, the restoration commenced under a European Protected Species licence, during which time twenty bat bricks, each with six crevices, were incorporated into the internal brickwork of the building, thereby replacing gaps lost during the restoration.

At irregular intervals during the winters from 1987 to 2012, the building was searched for hibernating bats by investigating the crevices in the pointing between the bricks of the building. During the period, some crevices became too wide to support bats, whilst others were created by the unstable movement of the building. Although the survey effort varied over the time period (see Table 1), the method was consistent and was conducted between early November until the end of March.

From the increase in the number of bats recorded, a conclusion could be drawn that the site has improved as a hibernaculum since the restoration. However, prior to the work commencing, the crevices in the brickwork were a lot deeper, with the potential for bats to be hibernating out of sight of the observer. Now, those large gaps have been closed, with the only potential roosting sites being in the bat bricks (120 bat-sized slots in total) and several of the original, shallow crevices that have been retained.

The recording of a Barbastelle, twenty five years after the first visit to the site, came as a pleasant surprise. Whether individuals of this species had previously been present, tucked away in deep crevices, is unknown. However, numbers of Barbastelles have been increasingly recorded at a similarly converted site at Coggeshall where, interestingly, several years elapsed before they were first observed. The greater frequency with which the Barbastelle is now recorded in Essex could be due to an increase and dispersal of the population or an improvement in the techniques (such as computer-based bat call analysis) being used to identify them.

The success of this project has been the rescue and restoration of an important listed building that was in imminent danger of collapse. With an expected increase in the number of bats using the site now that it is a maintained building, it has also safeguarded the future of a potentially important hibernation site in the county.

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## Projects News

A brief look at what's happening with some of our survey projects around the county (fuller reports to follow)

**Hatfield Forest** Under Jan Collins' Natural England licence, a Daubenton's and a Natterer's Bat have recently been radio tracked. Brown Long-eared, Common and Soprano Pipistrelle and two Barbastelles have also been caught in mist nets. Contact Colin: [edwards.colin1@sky.com](mailto:edwards.colin1@sky.com)

**Soprano Pipistrelle Project** Madeleine Ryan has been radio tracking bats from their Chappel roost all the way to Abberton Reservoir and the EWT headquarters at Abbots Hall.

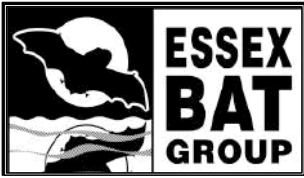
**Essex Nathusius' Pipistrelle Project** We now have a licence to trap, ring and radio tag Nathusius Pipistrelles and trapping sessions are being planned for September. Thanks to Essex Wildlife Trust and Essex Biodiversity Project for providing funding for the purchase of radio tracking equipment. Contact Pat: [pathatch@live.co.uk](mailto:pathatch@live.co.uk)

**Hylands Park** Whilst odd survey work has been carried out in the past, this is the first time EBG has set up a monthly survey with a long-term goal at Hylands Park, Chelmsford. The survey has got off to a fantastic start, with a number of keen volunteers turning up every month. As this survey is in its infancy it has been wonderful to see it evolve as each month different ideas and suggestions from volunteers have been taken on board - a true team effort. A number of species, including Common and Soprano Pipistrelles, Daubenton's and other Myotis, have been recorded. This survey will be carrying on until October and new volunteers are always welcome. Contact Alex: [mueller.a90@gmail.com](mailto:mueller.a90@gmail.com). *Alex*

**Hanningfield Soprano Pip Roost** Numbers have been surprisingly consistent at around 300 for three of the last four counts, which is higher than I expected after the tough winter. After the success of last year we are repeating our joint RHS/EWT event in August with a walk round the gardens at Hyde Hall, with the RHS people talking about the plants to attract the insects to attract the bats, before relocating to Hanningfield for a short talk before we watch the bats emerge from our roost. Contact Pete: [pete.claughton@btinternet.com](mailto:pete.claughton@btinternet.com). *Pete*

**Churchyard Survey** EBG has withdrawn from EWT's Churchyard Conservation Project due to incompatibility of working methods. However, EBG members have carried out churchyard detector surveys in the Harlow area and we are looking for volunteers to carry out surveys in all parts of the county. Contact Robin: [robin.cottrill@gmail.com](mailto:robin.cottrill@gmail.com)





## Committee members and other contacts

Bat Conservation Trust  
Partner Group



### EBG Committee

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**EBG Clothing** Essex Bat Group clothing is now available, featuring our evocative emblem of a bat flying over moonlit water

Sweat Shirt £16; Polo Shirt £15; T-shirt £12; Fleece £25; Gillet £20; Cap £9

Please send your order to Sue Burton, 2 Mellish Way, Hornchurch, Essex RM11 2GU, enclosing a cheque made payable to EBG for the total amount, including £2.35 per item post and packaging. Please allow 3-4 weeks for delivery. If you can collect your clothing from Harlow, Hornchurch or Ingatestone please let Sue know and omit the postage charge.



## Membership Form

You can use this form to renew your membership or recruit a friend

Send to: Helen Miller, 16 Hogarth Avenue, Brentwood, Essex CM15 8BE

Yes, I would love to become a member of E.B.G. for 2013\*, 2014, 2015 (delete as appropriate)

Name \_\_\_\_\_ Address \_\_\_\_\_

Email \_\_\_\_\_ Telephone \_\_\_\_\_

Using e-mail means we can send your newsletter and other correspondence electronically. Your e-mail address will not be passed on to any other organisation or used for any other purpose.

How did you hear about EBG? (internet, local bat walk, EWT, friend etc): \_\_\_\_\_

Please tick as appropriate:

Standard membership of the group is just £5 for 1 year

or £12 for 3 years

I would also like to make a donation of £ \_\_\_\_\_

I enclose a cheque for £ \_\_\_\_\_ (made payable to Essex Bat Group)

\*Your first year's membership will run until 31<sup>st</sup> December 2013.