



The Natterer

Autumn/Winter 2008



A Seasonal Message from Bat Conservation Ireland

The committee of Bat Conservation Ireland would like to wish all of our members a very Happy Christmas and joyful New Year. Thank you for your support in 2008.



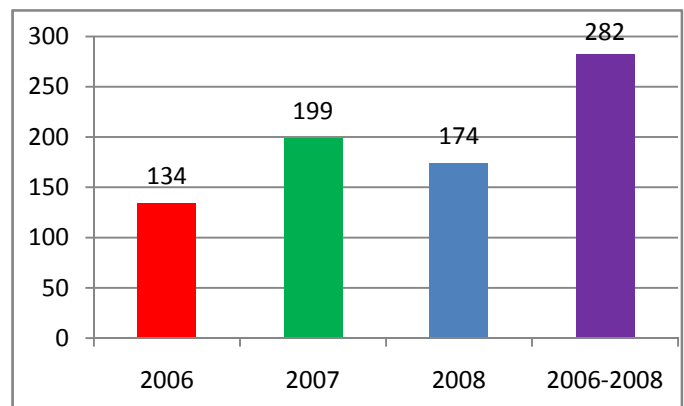
MONITORING IN 2008: AN UPDATE

by Tina Aughney

All-Ireland Daubenton's Bat Waterway Survey

As reported in earlier newsletters, this survey was piloted throughout the island in August 2006 and has gone from strength to strength since then. A total of 134 waterways were surveyed in 2006 while 199 waterway sites were surveyed by 189 volunteer teams in every county on the island in 2007. The largest number of waterway sites surveyed in 2007 were located in County Wicklow (14 waterway sites) and County Cork (14 waterway sites) followed by County Galway (12 waterway sites) and County Dublin (11 waterway sites). In 2008, volunteers were requested to resurvey their waterway sites. However, due to poor weather conditions, many volunteers were unable to do so.

To date, a total of 174 survey forms have been returned with surveys completed in all 32 counties across the island. The largest number of waterway sites surveyed in 2008 were located in County Wicklow (11 waterway sites), County Cork (11 waterway sites) and County Meath (11 waterway sites) followed by County Galway (10 waterway sites) and County Dublin (9 waterway sites). County Derry had the greatest increase in the number of volunteers participating in 2008 (5 waterway sites in 2007 to 8 waterway sites in 2008). The All-Ireland Daubenton's Bat Monitoring Scheme, through the participation of dedicated volunteers, has surveyed a total of 282 waterway sites (The equivalent of 282 km of waterway) across the island greatly adding to our knowledge of the distribution of this species.



Number of waterway sites surveyed (n=282) over the 3 years of monitoring (2006-2008)

Brown long-eared roost monitoring scheme

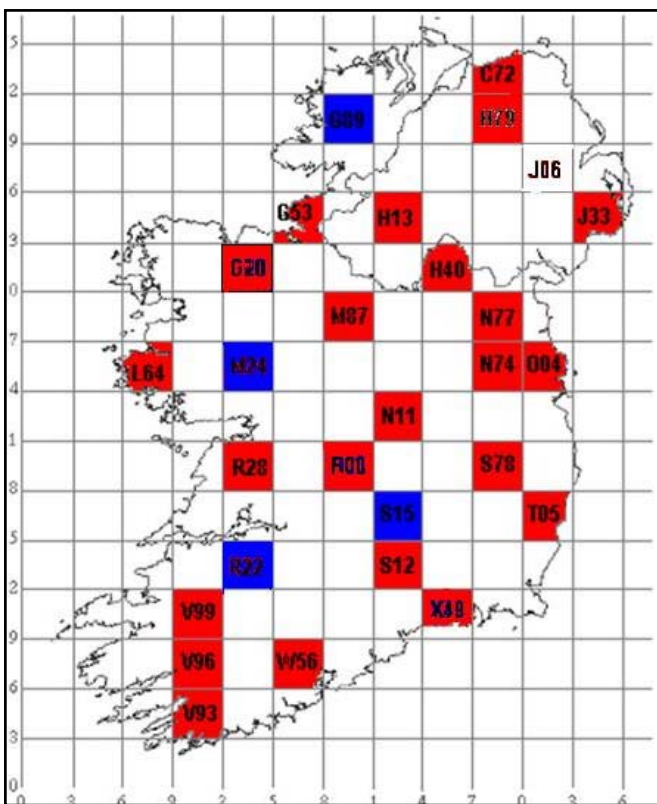
The Brown long-eared Roost Monitoring Scheme was also piloted in 2006. Funding was received from the NPWS for a three year programme (2008-2010). Over the three years, the principal aim of the scheme is to identify 50 roosts suitable for monitoring by either internal counts or emergence counts. In 2008, a total of 50 roosts were visited with 21 of these monitored (surveyed at least twice). Of the 54 roosts assessed to date (2007-2008), 25 have been deemed suitable for monitoring and will be monitored in 2009/10.

Car-based transect monitoring scheme in 2008

The Car-based Transect Monitoring Scheme was also successfully completed in 2008. From a pool of 28 x 30 km squares across the island, a total of 27 squares were surveyed at least once in July and August of this year while 23 squares were surveyed twice. This is the scheme that started it all for BC Ireland. It is a unique monitoring proposal initiated and funded by The Heritage Council and designed by Jon Russ and Colin Catto of Bat Conservation Trust UK in 2003. BC Ireland were kindly given the opportunity to

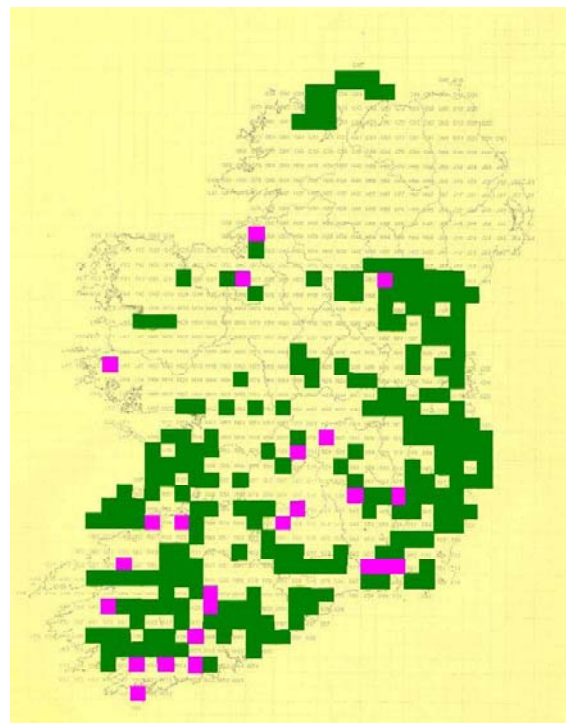
manage the scheme in 2004 and since then the number of 30km squares have increase annually from eight in 2003 to 27 in 2007, four of which are in Northern Ireland. Since 2004 and 2005 respectively NPWS and EHS have joined as funding partners. For volunteers this scheme involves driving along a mapped route of approximately 60 miles with a time expansion detector attached to the passenger side window. For 20 x 1 mile transects, the detector records bat echolocation calls encountered while the vehicle is driven at a speed of 24km/hour. A minimum of two people are required for a team and each 30km square is surveyed twice, once in July and once in August.

During 2008 BC Ireland added another very important project to its suite of surveys, BATLAS 2010, thanks to funding from the National Parks and Wildlife Service. The aim of this project is by 2010 to systematically map the current distribution of Ireland's nine species of vespertilionid bats. This is the first time that a systematic approach on a national basis has been applied to bat distribution. The Republic of Ireland can be divided into approximately 750 10 km squares. Prior to the commencement of BATLAS 2010, the percentage of squares that held records for our common species, the soprano and common pipistrelles, Daubenton's, Leisler's and brown long-eared bats were 26%, 24%, 20% and 11% respectively, so clearly there is a lot of work to be done to establish records for these and the remaining species throughout most of the Republic. The survey began in earnest in mid-summer, so was dogged by the wet, cold and windy weather that was such a feature of our summer. Despite this, 259 10 km squares were fully or partially surveyed, either by Ruth Carden, the survey coordinator, or by volunteers. A detailed report on the survey to date will appear in the next newsletter, along with plans for 2009.



Map showing the location of the 30 km squares surveyed in 2008: Red squares (surveyed twice), Blue squares (surveyed once) and White square (not surveyed).

The success of these monitoring schemes is due to the large number of volunteers who participated over the years. BC Ireland will continue to monitor in 2009. BC Ireland will be organizing another series of training courses throughout the island in June and July 2008. Full details of the results will be available in our Annual Report due in April 2009.



Map of Ireland illustrating the 10km squares surveyed in 2008 BATLAS field season: fully surveyed squares are coloured green (n = 235), partially surveyed squares are coloured pink (n = 24)

A new centre for bat research in Ireland

by Daniel Buckley

Given the many threats that bats face, conservationists and policy makers need to have the most up to date scientific information on their ecology and biology in order to ensure their long term survival. For example, it is important to know what foraging habitats a particular bat species needs, so that it can be protected. Ireland actually has a very long history of bat research. You just have to look into the older editions of the “*Irish Naturalists’ Journal*” or even the “*Irish Naturalist*” to see the excellent observations made in the by R.J. Kinahan and C.B. Moffat. In the latter part of the 20th century, Professor James Fairley’s research group in NUI Galway conducted excellent research on aspects of the ecology of the lesser horseshoe and Leisler’s bat and pioneered the methodology of bat faecal dietary analysis.

In May 2008 an exciting development in bat research occurred, when NPWS awarded 700,000 euro to University College Dublin and Queens University Belfast to set up a new centre of excellence for bat research, called the CIBR (Centre for Irish Bat Research). The cross-border element to this centre provides an excellent opportunity to look at our bats on an all island basis, as wild animals do not recognise human invented borders.

The centre’s first project aims to look at aspects of the ecology of our rarest bat species’, the whiskered bat (*Myotis mystacinus*), Brandt’s bat (*Myotis brandti*) and Natterer’s bat (*Myotis nattereri*). Virtually nothing is known about these species in Ireland. Brandt’s bat, which was only discovered here in 2003, is physically quite similar to the whiskered bat and can only really be identified using DNA markers. So far it is only known from five counties; Wicklow, Kerry, Meath, Tipperary and Clare. However, only two of these records have been confirmed genetically and there are problems with using the recommended key physical features to separate them from whiskered bats.

Whiskered bats are distributed throughout the island but occur in very low numbers and the same is true for Natterer’s bat. This project is taking a holistic approach to studying these species by using

genetics to look at population structure in Ireland and phylogeography (the origins of the Irish populations in Europe), radio-telemetry to look at home ranges and habitat usage and GIS to look at building a predictive distribution model for these species.

The research team consists of four principal investigators; Dr Emma Teeling and Professor Tom Hayden of UCD and Professor Ian Montgomery and Dr Paulo Prodohl of Queens University Belfast. Two PhD students; Daniel Buckley and David Scott and two Post doctorate researchers; Dr Emma Boston and Dr Mathieu Lundy have come on board to carry out the research.



Ireland’s latest batch of bat workers

So far the team has been concentrating on surveying maternity roosts from historical records and swarming sites, none of which have been known previously in Ireland, apart from one site in Co. Fermanagh. Bats were captured during the fieldwork and biopsies taken from the wing to provide tissue for the genetic research, as well as a range of measurements such as forearm length and weight.

Fieldwork is a double edged sword full of ups and downs. These bats have been extremely difficult to capture and has led the team to go to any length or height in order to get the little blighters as you can see from the photo below!

Swarming bats in County Fermanagh

By Austin Hopkirk

A bat handling workshop took place in September involving members of BC Ireland, the CIBR, Professor John Altringham and Natalie Boyle of Leeds University. Unfortunately the weather forecast played havoc with the best laid plans on the first night, so no bats were caught. Thankfully conditions improved on the second night, so mist nets were erected in the grounds of the National Trust's property at Florence Court. Several brown long-eared and Natterer's bats were caught, all males. Attention then turned to the mist netting being done at Marble Arch Cave, where a bit of cheating was going on! A special acoustic lure was being used to attract bats to the nets and it proved very effective. This enabled everyone to gain experience at checking the nets and safely removing bats from them. In addition, three bats, a Leisler's, a common and a soprano pipistrelle, all rescued animals and now in permanent captivity, were on hand to allow easier examination in the comfort of the visitor centre at Marble Arch, which was much appreciated.

Professor Altringham and his students have been at the forefront of research on bats as they swarm at cave sites each autumn. It is now known that many species of temperate bat visit underground sites prior to hibernation, where they can spend hours chasing each other in and out of the cave entrances. It is believed that this behavior is part of the mating ritual and allows gene flow between bats that have spent the summer living in isolated populations.



Natalie Boyle checking a harp trap and mist net



Harp trapping at a roost

However, the work has taken us to some beautiful parts of the island and allowed us to poke around some of the most beautiful period properties in Ireland. Next year we will be conducting radio telemetry studies at maternity roosts and swarming sites. By building up a picture of the population structure and ecology this project will eventually inform NPWS on how best to protect and monitor these vulnerable species.

We are still actively searching for whiskered, Brandt's and Natterer's roosts, so if you are aware of any such sites we would be very interested in hearing from you. Please contact me at 0863691982 or email: dan.j.buckley@gmail.com.

For more information on our organization and the research please visit our website at www.cibr.ie

The Spring/Summer newsletter will feature updates on the bat research being undertaken by Isobel Abbott on mitigation measures for bats during road construction and by Serena Dool on the phylogeography of the lesser horseshoe bat.

A bat symposium in Dracula's Own Country!

by Enda Mullen

Six years ago when I heard that the 11th European Bat Research Symposium (EBRS) would be held in Transylvania, I knew I just had to be there. A bat worker born and reared close to the home of Bram Stoker could not possibly miss a conference in the land he made synonymous with bats. And so I set off for Cluj Napoca as part of a very respectable Irish delegation.

I have to admit that I really enjoy these symposia. There's a chance to meet old friends from previous occasions and to meet new ones. It is exciting to hear cutting edge research from the people involved in it and to swap stories about how we do things. Add to this the heady mix of traipsing around new countries on the track of bats previously only heard on CD and it becomes an exciting holiday too.

It looked as if things had gotten off to a very rocky start for the Irish delegation due to luggage finding its way to Hungary, a bed in a hotel as yet unbuilt and a BCI Rep stranded in Poland, but at least the food and drink made it to Cluj, so the delights of the gastronomic evening got us up and running.

Across the road from the college was a public park with a lake fringed by weeping willows. Our intrepid explorers, Brian and Barry, discovered male noctules calling there the first night, so by the second night there were little groups of head-torched batters parting the branches of the trees in search of these romantic noctules. It was then that we discovered that bats were not the only species using these trees as mating roosts and many a *Homo sapiens* had to find another location before the week was out! It was very exciting to hear the noctules call and to be able to detect changes in their song as the females arrived. Sadly, one night, we witnessed distress cries from both the bats and ourselves when we were all fogged with insecticide by a passing City Council truck. If we have seemed strange since we came home - that might explain it!

In terms of research papers I have always had the fieldworker's bias towards practical talks, especially those which show how to do bat research people, money or time are in very short supply. Perhaps with the looming global recession, future

conferences will move back to such talks, but for this conference almost every piece of research presented orally had a genetic element to it. That is not a criticism - because this research is innovative and interesting - it's just that it is at a remove from my day to day work with bats.

Emma (Boston) flew the flag proudly for us with her input on the phylogeography of Leisler's bat. Sebastian (Puechmaille) received the prize for the best student presentation when he told us about the possibilities of cryptic species of bumblebee bat in Myanmar. Congratulations to him. The Irish were even there in disguise! Stephanie Murphy gave a really good presentation on her work on social calls in brown long-eared bats. In talking to her afterwards it turns out that she was a native speaker from Connemara who moved to the UK when she was 15. And then there was Niall, a Dubliner hiding away in Vietnam as he studied under Professor Paul Racey. Long live the Northside!

I was impressed by a LIFE Project in the south of France studying *Myotis schreibersii*. There were at least four talks about this project, because it was so wide reaching. A conversation afterwards with French bat researcher Stephane Aulagnier helped me realise that the bureaucratic learning curve in dealing with a LIFE project was just a challenging as gaining new information on bats.

Another aspect of the EBRS is the poster display, which is always launched in a civilised fashion with food and wine. Here again was another moment of glory for Ireland's adopted sons, with the student prize awarded to Bruno Simoe for his interesting display on mitochondrial lineages within populations of Daubenton's bat. Thanks too to all the other Irish people displaying posters. It is good to know that so much bat work is underway here.

The poster evening provides an opportunity for delegates to meet and question those whose research is presented by poster. It was during this session I tracked down examples of the "practical" research I was most attracted to. For example, I had a very interesting chat with Irene Weinberger, whose work on re-homing horseshoe bats in Switzerland bears a lesson of caution for all. She found the survival rates of her re-homed bats to be low and predation rates high. She also found that

the bats travelled long distances across mountains to return to their original roosts, but those that were moved >40km were not successful. Importantly for us, her lesser horseshoe bats fared worse than their bigger cousins, the greater horseshoes.

One other reason why I love these meetings is that they provide a great chance to see interesting parts of the world (like Galway, the venue for the previous symposium!) and to talk to the local people. Cluj Napoca is a city of cranes and seemed to be in the middle of a building boom. This was contrasted with a countryside where traditional methods of agriculture abounded. Indeed, even in the city people sold their garden produce at their gates to commuters on their way home from work. I was really touched by a chat with one of the Romanian professors about life under Ceausescu when, he said, people's whole aim in life was to have enough for their children. I sensed hope in the Romanians, that life was improving for them and that they were ready to tackle the challenges facing them.

Cluj Napoca and the area surrounding it are rich with history and the blend of Romanian, Hungarian and Roma ethnic traditions. Tina and I spent some time one evening in the historic quarter of the city and finished up having dinner in a traditional Hungarian restaurant. All to be highly recommended!

The symposium also provided us with a choice of fieldtrips, so Tina and I chose the 8km hike through the karst countryside to visit a cave system which has 60,000 hibernating bats each winter. It is a traditional tourist spot in a magical gorge but people can no longer enter the cave as some of the metal walkways have collapsed. This has led to an increase in the number of bats using the cave annually. Getting there is an interesting "Indiana Jones" type experience in its own right, as my photo will testify. A Health & Safety Officer's nightmare!



Walking the planks to get to the cave

With so many oral papers presented during the week, it is very hard to choose highlights, but I must mention the research of Danielle Linton, based in the UK, who must be doing one of the most intensive field-based PhDs. She is undertaking both walked and driven transects which are coupled with detailed habitat mapping, in a landscape of principally arable farmland. One of the things she has noticed so far is the amount of use bats actually make of the centre of arable fields, as well as the surrounding hedgerows. She gave us a demonstration of the real-time sonogram displays she uses in the field (any follow up questions to on this are to be directed to Tina!). It will be interesting in time to come to compare her results and methods with those of our own monitoring in this country.

As a bat worker I felt a great sense of fulfilment in that I had not only finally made it to Transylvania but had been able to immerse myself in the world of bats for a full week. Am I fully satisfied? Certainly not! The piggy bank marked XIIth EBRS in Lithuania in 2011 is already accepting donations.

(PS You can download the symposium abstracts from the XIth EBRS website, [www](http://www.ebbs.org.uk).)

An Irish bat conference was scheduled to take place in 2009 but due to plans for a three-day All Ireland Mammal Conference in November, the bat conference is being held over until Spring 2010. Undoubtedly, with so much research going on, bats will feature at the conference in November.

VIIth European Bat Detector Workshop

by Brian Keeley

Hungary is not a country that many people would immediately associate with bats. (Romania on the other hand is, as you will see from Enda Mullen's review of the Transylvanian Symposium). They would be very surprised to learn the wealth of Hungary's bat fauna, in a country that is more strongly connected in my mind to large open plains with bustards and sunflowers.

The VIIth European Bat Detector Workshop took place on the 13th to 16th August 2008 and was based in Felsőtárkány, in the Bükk National Park, north-east of Budapest and close to the town of Eger. This village is the site of the HQ of the National Park Rangers and hosts a dormitory, guest houses and small hotels that facilitate those who wish to enjoy the surrounding area and the National Park in particular.



Felsotarkany, the location of the workshop. The artificial lake and surrounding trees are 200 years old.

Participants came from England, Scotland, Belgium, Netherlands, Portugal, Italy, Poland, Finland, Estonia, Hungary, America, Australia, India, Norway and Ireland, the latter ably represented by myself and Barry Ryan. However, we soon met up with another Irishman who was involved in giving the course, Neil Furey, whose work has been based in Vietnam, a long way from Baldoyle.

The talks on bat detector work were given by Danilo Russo, Neil Furey and Chris Corben and there were also talks on Hungary from National Parks staff. Our three nights of study were to encompass an artificial lake, a pool and reservoir surrounded by forestry and the mouth of a cave on a nearby plateau.

An artificial lake doesn't sound very exciting as a mist-netting venue, but here we caught the following species: Daubenton's, whiskered, Pond, notch-eared, noctule, Leisler's, soprano and common pipistrelle. We also saw and heard: barbastelle, Bent-winged bat, greater horseshoe and serotine.

The Pond bat is a mighty creature in comparison to Daubenton's bat and it is clear when looking at them that you have never seen this bat in Ireland. The serotine arrived early and you would make the assumption based on size that this bat is in fact a bird. No bats could be that big and obvious!



Top, Pond bat (*Myotis dasyneme*). Below, Daubenton's bat (*Myotis daubentonii*). Both feed over water (Photo B. Keeley)

The pool in the forest would be ignored by most Irish bats. Try telling that to the Hungarian bats who throng to this meagre site including the above line-up (Daubs, Pond, pipistrelles, whiskered) as well as barbastelles, bent-winged, diving noctules and Leisler's, *Myotis alcathoe*, grey and brown long-eared bats among others. In the air, noctules and Leisler's and serotines were all noted. Noctules and serotines I have always considered rural or parkland bats. Hence, their presence around the Hungarian Parliament building in Budapest threw me a bit!

