

# The Natterer

Summer 2005

## Bat Detector Workshops

Bat Conservation Ireland organises a Bat Detector Workshop on a yearly basis to provide training for new members. There is a paucity of information on the regional distribution of Irish bat species. Such workshops will provide training for people interested in collating data on their local bat populations. Records are then submitted to BC Ireland and entered onto our on-line database.

Attendees are introduced to the gamut of sonic information produced by individual bat species and are thought how to interpret this information. Workshops involve informal teaching sessions coupled with field excursions using heterodyne bat detectors. At the end of the workshop participants are able to differentiate between the pipistrelle species and identify Leisler's bats, *Myotis* species and brown long-eared bats.

## Slane Bat Detector Workshop, 2005

Since 2003, workshops have been held in Slane, County Meath. As a result, BC Ireland have collated extensive information on bat species and roosts located in the area.

Species identified during workshops to date are: Leisler's bat, brown long-eared bat, common pipistrelle, soprano pipistrelle, Natterer's bat, Whiskered bat and Daubenton's bat.

## Bat Conservation Ireland On-line Database

BC Ireland received funding from The Heritage Council in 2004 to create an on-line database. This was designed by Mr. Cormac Parle, IT Consultant, as a single central data repository for all records, which can be continuously updated via the internet. Access to the data is online and administered by BC Ireland.

The Heritage Council also funded the entry of historical data for the years 2000 to 2004. Pre-2000 records will be entered by committee members in their own time as an on-going development of the database. If you wish to submit records, a Database Records Sheet is available from BC Ireland – please send an email to [tinaaughney@eircom.net](mailto:tinaaughney@eircom.net).

*Plate 1: Tutors, caterers and attendees of the Slane Bat Detector Workshop 2005*



Feature Article: Lisconny Bridge, Co. Sligo – A Success Story for Bats!

By Dr Caroline Shiel

(This article is a follow-on from a previous article "Bats and Bridges" in The Natterer May 2004)



*The Natterer, Autumn Edition 2005 – if you are interested in submitting an article or as a member, you wish to read material on particular topics, please send an email with details to [tinaaughney@eircom.net](mailto:tinaaughney@eircom.net). Articles to be submitted by September 30<sup>th</sup>.*

## **Lisconny Bridge, Co. Sligo – A Success Story for Bats!**

By Dr Caroline Shiel

Lisconny Bridge is a beautiful five-arch masonry bridge spanning the Unshin River in Co. Sligo. The bridge first appears on a map of the area dating from 1830, indicating that it was constructed prior to this date.



Plate 2: Lisconny Bridge

The bridge was first surveyed for bats in July 1998 as part of a survey I carried out on behalf of The Heritage Council. The results of this survey - "Bridge Usage by Bats in County Leitrim and County Sligo" are available on The Heritage Council's website [www.heritagecouncil.ie](http://www.heritagecouncil.ie)

In July 1998 it was established that Lisconny Bridge held a nursery roost of approximately 25 Daubenton's bats (*Myotis daubentoni*). The roost was located in a deep fissure running across the barrel of one of the arches. At that time it was obvious that the bridge was in need of major strengthening work. There was a large deep fissure running across two of the arch barrels. In addition, the bridge abutments were being seriously undermined by the river and were becoming unstable

I was first contacted by Mr. Gary Salter, Engineer, Sligo County Council, in March 2003 regarding forthcoming strengthening works scheduled for

Lisconny Bridge later in the year. In August 2003 Mr Tim Roderick of NPWS recorded four Daubenton's bats roosting in the same fissure that had held the nursery roost in 1998. Towards the end of August 2003 I was contracted by Sligo County Council to liaise with Mr Niall MacPhilips of Leamac Ltd, Washington Street, Cork (an engineering firm which specializes in the restoration of heritage bridges) in relation to facilitating bats during strengthening works on Lisconny Bridge.

I carried out an initial inspection and evening emergence watch with a bat detector at the bridge in early September 2003. By this time hand-grouting of the bridge walls was completed but no work had been carried out under the arches. Four Daubenton's bats were recorded roosting in crevices under four separate arches. After dusk these bats emerged to forage.

In mid-September I met with Gary Salter and Niall MacPhilips at Lisconny Bridge to discuss the retention of crevices for bats under the arches. It was established that the bridge was to be pressure-grouted and cement floors laid under the arches to stabilize the bridge foundations. It was agreed that the retention of smaller crevices for individual bats would be relatively uncomplicated and would be carried out by blocking suitable crevices with polystyrene to prevent infill of liquid cement during pressure grouting. It was also agreed that sections of the large fissure would be left open to accommodate the nursery colony. Three Daubenton's bats were clearly visible roosting in crevices under three separate arches and these were shown to the engineers. It was agreed that 3-4 crevices would be retained under each arch. I clearly ring-marked a selection of suitable crevices with white paint to include all crevices recorded as roosting sites during all previous surveys.

Strengthening works commenced at the end of September 2003 which included the laying of new cement floors under the arches, pressure grouting to fill internal voids in the bridge and pressure

pointing under the bridge arches. Prior to pressure pointing all crevices that had been marked for retention were blocked with polystyrene to prevent the infill of grout. Crucially, Leamac Ltd used a fine nozzle to apply grout to the undersurface of the arches. They worked carefully to fill in voids around the stonework so as not to cover the surface of the stones and not to spray over targeted bat crevices. The usual method of applying grout under bridge arches is by a method termed shotcreting or guniting where liquid cement is sprayed to a depth of several centimeters thick. This completely covers the stonework, very much diminishing the beauty of the bridge, and fills up all crevices with the consequential loss of roosting sites for bats. Prior to pressure grouting taking place in early October any remaining bats had already vacated the bridge. Arrangements had been put in place to physically remove bats if they were still roosting in the bridge. Typically bridges are deserted by bats in September/October when they move to their hibernation sites.

Works were completed by late October. Cement floors had been laid under all five arches. The bridge had been pressure grouted but cavities had been retained as indicated. A total of 13 crevices to accommodate individual and small numbers of bats have been retained under the arches and most importantly three sections of the fissure have been left open, to its original depth, to facilitate the



nursery colony. In addition stone ledges have been incorporated under arches 2 and 4 to accommodate nesting dippers.

The 2004 bat season was eagerly awaited to see if the bats would return to the bridge. Disappointingly, in early July 2004 only 4 bats were recorded in the nursery crevice. However, most of the other smaller crevices which had been retained held single bats with subsequent surveys during 2004 revealing that these singles moved around between the range of crevices that were available to them.

On 3<sup>rd</sup> July 2005 a somewhat apprehensive visit to Lisconny Bridge revealed a nursery colony of approximately 25 bats in the nursery site where they were first recorded in 1988. The young were estimated to be between one and two weeks old.

Lisconny Bridge is an excellent example of how bats can be accommodated during bridge strengthening procedures. But it also clearly illustrates that close liaison between a conscientious contractor and bat specialist is necessary both prior to and during strengthening works. Lisconny Bridge is a showcase which should be used as an example to engineers in other county councils throughout Ireland. Full marks to Sligo County Council and Leamac Ltd!

*Plate 3: Examples of crevices retained for bats under one arch of Lisconny Bridge (Below)*

*Plate 4: Repaired fissure under an arch of Lisconny Bridge – note how the stonework has not been covered by grout (Far Left)*





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*The Natterer, Autumn Edition 2005*  
Feature Article: Development of a Car-based Bat  
Monitoring Protocol for the Republic of Ireland

Brief introduction to:

### **Development of a Car-based Bat Monitoring Protocol for the Republic of Ireland**

by Dr Niamh Roche

In 2003, The Heritage Council requested Bat Conservation Trust (BCT) UK to design a novel method of monitoring bat populations in the Republic of Ireland. A car-based monitoring strategy was devised and piloted in 2003.

In 2004, Bat Conservation Ireland, in partnership with The Bat Conservation Trust, administered the second year of a pilot bat monitoring project in Ireland. This was funded by both The Heritage Council and National Parks and Wildlife Service.

A car-based sampling strategy devised by the BCT involved the following: surveyors were provided with a 30km<sup>2</sup> square and asked to devise a 58-mile (93km) survey route consisting of 20 monitoring transects of 1 mile (1.609km) length, spaced at 2 miles (3.2km) apart. Surveyors gathered data (in July and again in August), while driving at a standard speed, with time expansion bat detectors. Bat echolocation calls were recorded onto minidiscs and species were identified post-survey by sonographic analysis.

Statistical analyses of Power were carried out based on the data gathered in 2003 and 2004 to determine which species could be monitored with the method.

Power analysis demonstrated that Red Alert targets for common pipistrelles, soprano pipistrelles and Leisler's bats could be met within 15 years if 10 squares (each with 20 transects) are

surveyed twice annually. If 15 squares are surveyed twice annually, Amber alert targets can be met for common pipistrelles within 20 years. Power analysis could not be carried out on *Myotis* bat species due to low encounter rate.

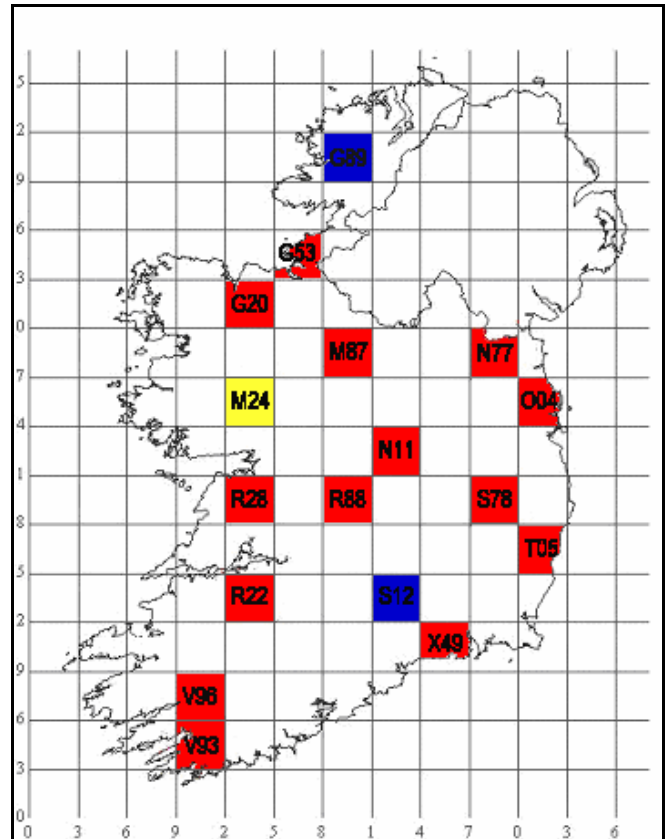


Plate 5: 30 km<sup>2</sup> squares surveyed in 2004

This monitoring project is ongoing in 2005 the the addition of three new 30km<sup>2</sup> squares.

A feature article will appear on this topic to provide greater detail on results gathered to date in the Autumn Edition of *The Natterer*.