

# The Natterer

Autumn 2005

## Bat Box Building Workshops

Bats are social animals and often congregate in large numbers. Providing bat boxes offer bats additional roosting areas, or can often help to replace lost or degraded roosting sites once sited correctly. They are particularly suitable for providing artificial roosting sites in areas such as coniferous plantations where there is a shortage of natural sites. Bat box schemes are also a great education tool and allow communities and schools to get involved in bat conservation.

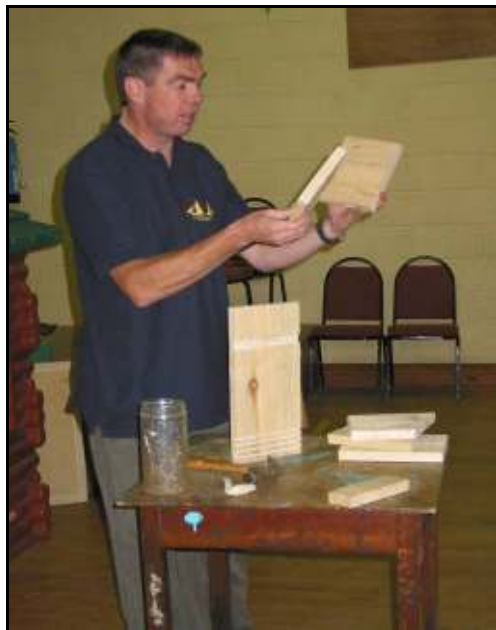
Many bat box designs are available. A basic bat box is constructed from untreated rough sawn timber and resembles a bird box, but the typical access hole in front of the box is replaced by a narrow slit of up to 1.5 cm in width on the underside of the box.

Bat Conservation Ireland holds bat box building workshops where groups participate in a practical session of building a bat box. Funding was received from Patagonia Clothing Company and Meath County Council in 2005 to hold a series of such workshops. These were undertaken by Colum Fitzgerald in a number of venues such as libraries and schools during the summer months of 2005.

A maximum of 15 people are catered for during these workshops where each person is provided with the pre-cut materials to construct their very own wooden bat box. Colum demonstrates the construction of bat boxes in stages with attendees receiving one-to-one attention by Colum during the workshop.

Plate 1: Colum demonstrating the building of a bat box

Plate 2: Attendees at a workshop held in Virginia, Co. Cavan



Colum Fitzgerald can be contacted at 087 9982628

He is also prepared to construct bat boxes in numerous shapes and designs for Bat Conservation Ireland members. A price list is available from Colum.



**Feature Article:** Development of a Car-based Bat Monitoring Protocol for the Republic of Ireland by Dr Niamh Roche

(This article is follow-on from an introduction piece in The Natterer Summer 2005)



*The Natterer, Winter 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. Articles to be submitted by November 30<sup>th</sup>.*

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

by Dr Niamh Roche

**GRANT FUNDED BY THE HERITAGE COUNCIL AND NATIONAL PARKS AND WILDLIFE SERVICE**

In 2004, Bat Conservation Ireland, in partnership with The Bat Conservation Trust, administered the second year of a pilot bat monitoring project in Ireland.

### Methods

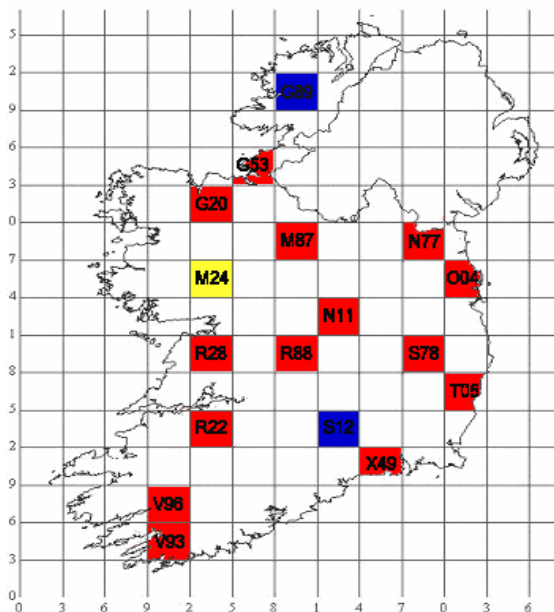
A car-based sampling strategy was devised by the BCT. Surveyors were provided with a 30km<sup>2</sup> square and asked to devise a 58-mile (93km) survey route consisting of 20 monitoring transects of 1 mile (1.609km) length, spaced at 2 miles (3.2km) apart. Surveyors gathered data (in July and again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

### Results

In 2004, 998km of monitoring transects were covered and 2033 bats calls were recorded to minidisk. Common and soprano pipistrelles were the most commonly encountered species. Soprano pipistrelles were recorded at lower levels than common pipistrelles throughout the country, excepting some survey squares north and west of the Shannon. Graphical comparisons of Leisler's activity levels in different squares around the country showed that there may be some inland migration of Leisler's bats in August but further investigations need to be carried out to confirm this.

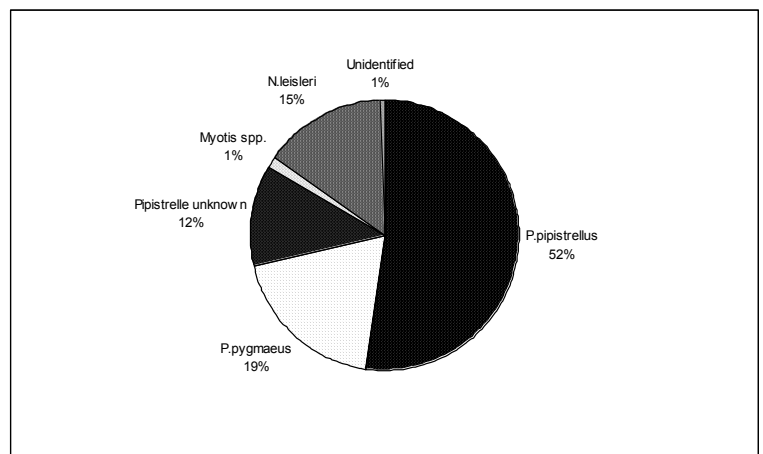
Power analysis demonstrated that Red Alert targets for common pipistrelles, soprano pipistrelles and Leisler's bats could be met within 15 years if 10 squares (each with 20 transects) are surveyed twice annually. If 15 squares are surveyed twice annually, Amber alert targets can be met for common pipistrelles within 20 years. Power analysis could not be carried out on *Myotis* bat species due to low encounter rate.

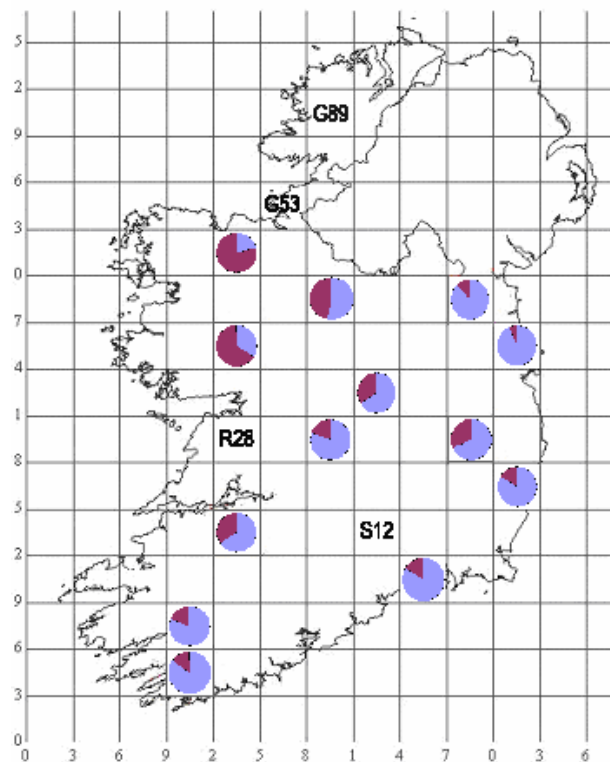
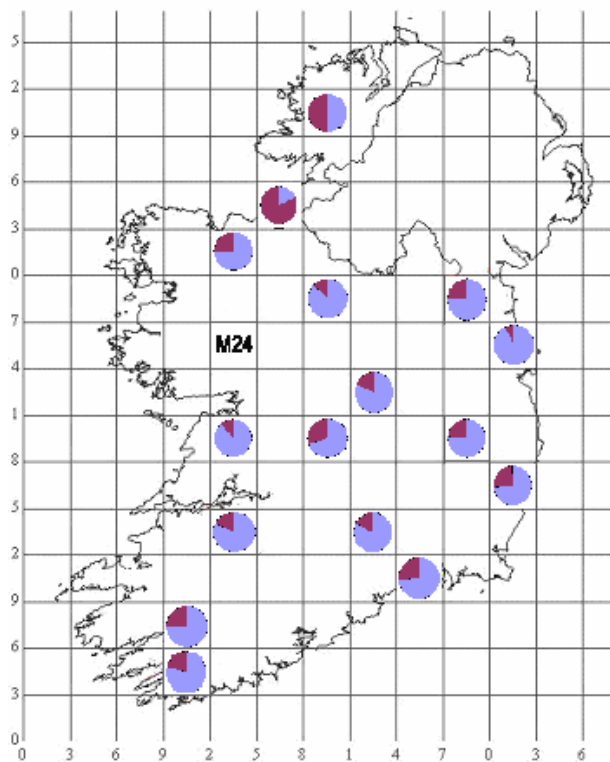
This monitoring project was also undertaken in 2005.



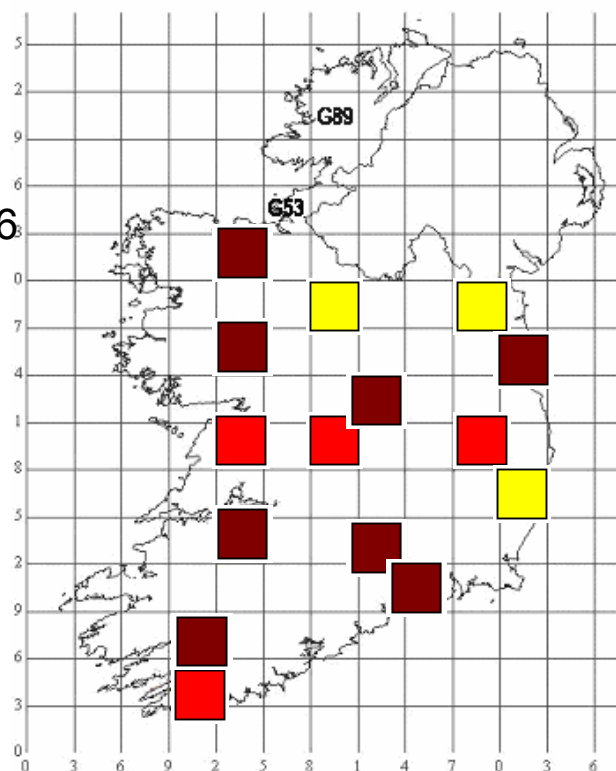
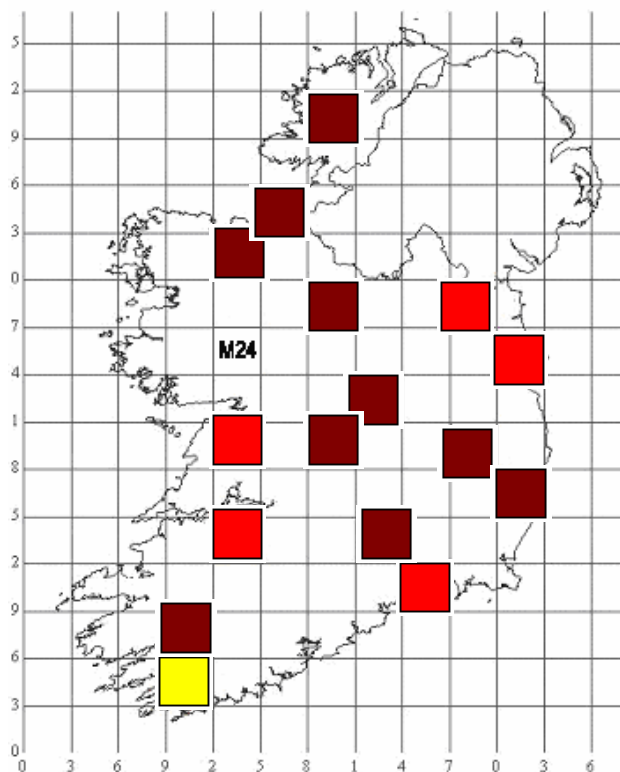
**Figure 1:** Squares in which surveys were carried out in 2004. Red indicates those 30km<sup>2</sup> squares in which surveys were repeated. Blue squares were surveyed once in July and the square indicated in yellow was surveyed once in August.

**Figure 2:** Pie chart - Proportion of species encountered during 2004 survey





**ABOVE:** Pie charts illustrating relative encounter rates – per km – of common pipistrelles, *Pipistrellus pipistrellus*, (blue) and soprano pipistrelles, *P. pygmaeus*, (burgundy) in July (map on left) and August (map on right). Relatively higher activity levels of common pipistrelles compared with soprano pipistrelles can be observed in most squares except in the north west. Squares have no pie charts if no data is available.



**ABOVE:** Leisler's bat, *Nyctalus leisleri*, activity hotspots in 2004 (encounter rate per km), July map on left and August map on right.



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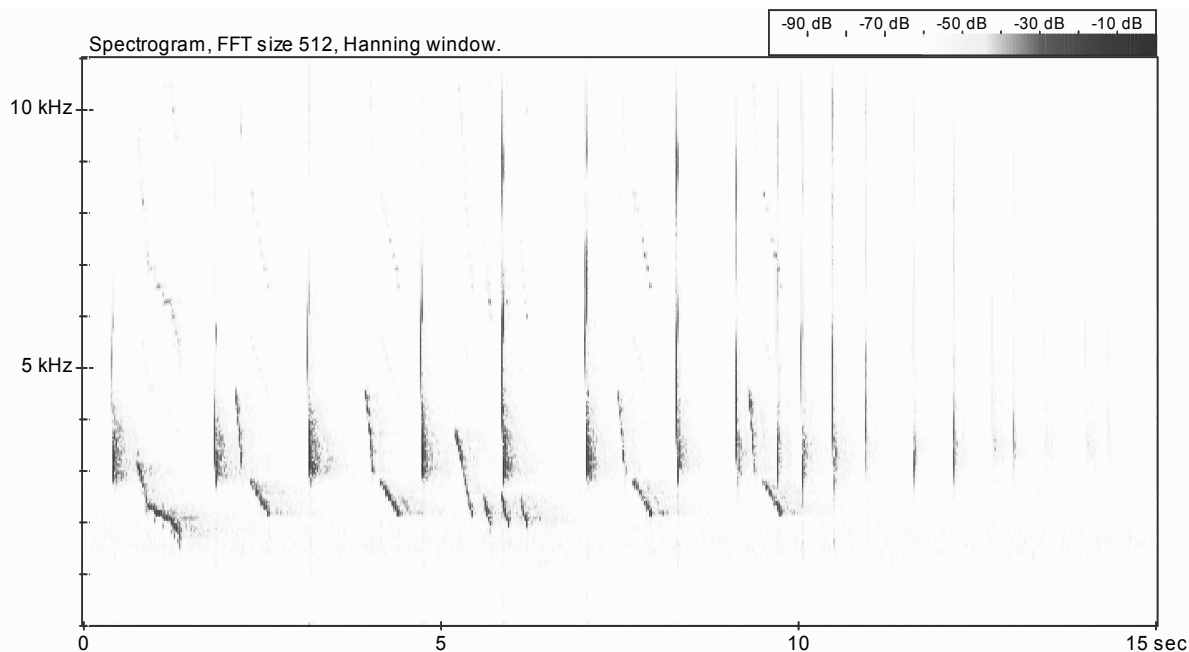
*The Natterer, Winter Edition 2005*  
Feature Article: Car-based Bat Monitoring Protocol for  
the Republic of Ireland, Results from 2005.

### BCIreland Committee Advanced Training Workshop – Portumna Forest Park, May 2005

It is important for any ecologist, regardless of their field, to keep up with the latest advances in sampling methods. This is especially true for bat specialists who rely greatly on technology during field work. An advance training workshop was organized in May 2005 and was attended by a number of committee members and NPWS staff. This workshop was organised principally to demonstrate the use of new technology named The Echolure. This technology was developed by Mr. Frank Greenway, a renowned bat specialist based in Britain. Basically, The Echolure plays social calls as a means to attract bats. Such as device can increase the number of bats captured in mist nets or

harp traps as a result of bats flying in to investigate the ‘bat’ emitting played social calls.

Frank traveled over to Portumna, Co. Galway to demonstrate his equipment where mist nets were erected in sections of Portumna Forest Park (with permission granted by Coillte) over two nights. It was also useful for many of the attendees to gain further knowledge of the use of mist nets and harp traps. During the weekend the following species were identified by hand from mist nets: soprano pipistrelle *pipistrellus pygmaeus*, common pipistrelle *Pipistrellus pipistrellus*, brown long-eared bat *Plecotus auritus*, Natterer’s bat *Myotis nattereri* and whiskered bat *Myotis mytacinus*. In addition, Leisler’s and Daubenton’s bats were detected foraging and commuting within the forest park.



Sonogram (recorded by Time Expansion Detector) demonstrates The Echolure – A *Myotis* bat (vertical lines, which increase in number as the bat flies closer to The Echolure) echolocating while flying in close to The Echolure. The Echolure social call is the series of diagonal lines and broken lines on the sonogram.

