



**Mammals in
a Sustainable
Environment**



Bird of Prey and Small Mammal Event

Contact: Denise O'Meara, Waterford Institute of Technology, domeara@wit.ie

On Saturday 21st of April, the Mammals in a Sustainable Environment (MISE) Project held a joint event with BirdWatch Ireland (BWI) and South Tipperary Co. Council (STCC) at the Hotel Minella, Clonmel. The event was attended by 30 local wildlife enthusiasts of all ages. The morning got underway with a short introduction of the MISE Project by one of the project leaders Peter Turner from Waterford Institute of Technology (WIT). Peter described the project which is funded by the European Regional Development Fund under the Ireland-Wales Programme 2007-2013 (INTERREG IVA). The project also includes partners in Waterford County Council and the National Data Biodiversity Centre and aims to foster community involvement in mammal conservation through non-invasive mammal surveys and the use of DNA technology available at WIT <http://www.miseproject.ie/>.



Peter Turner WIT (right) analysing owl pellets with Kevin Power and his daughter, Kilmacthomas (left).

Labhoise McKenna, the Heritage Officer from STCC introduced the audience to the county's Biodiversity Action Plan and also talked about the River Suir INTERREG IVC Project called "Waterways Forward", which aims to promote the management and sustainable development of inland waterways across Europe <http://www.waterways-forward.eu/>. A selection of "Good Practice" project posters were displayed at the event.



Front left: Mieke Muyllaert (South Tipp Heritage Forum), Labhaoise McKenna (STCC) and Dan Hogan (South Tipp Heritage Forum). Rear Right: Brian Power, Carlow and Brendan Fennessey, Clonmel.

John Lusby, Raptor Conservation Officer from BirdWatch Ireland spoke about birds of prey in the county and illustrated that the south Tipperary area is one of the most important habitats for barn owls in the country. Barn owls nest in old buildings such as ruins of old castles and John and his colleagues from BWI travel the length of the country monitoring these sites annually. John also spoke of the small mammal assemblages that form part of the barn owl's diet and how he studies them by analysing owl pellets. It was using this method that John and his collaborator David Tosh from Queens University Belfast (QUB), first discovered a new shrew species in the county in 2008 called the greater white toothed shrew (gwts). The shrew which is not native to Ireland is now forming part of the barn owl diet. The bank vole is another non-native species in Ireland and was believed to have been accidentally introduced with the transport of machinery into Limerick in the 1920's. The bank vole has since spread from its introduction site and is now regularly consumed by barn owls and other birds of prey. John also spoke about some recent work in QUB where it has been shown that in Tipperary, where the gwts and the bank vole occur, the native pygmy shrew and woodmouse have declined or disappeared altogether. This worrying trend may be start of a new invasional crisis such as has been seen with the decline of the native red squirrel population due to competition with the introduced North American grey squirrel. There is also some evidence that suggests that when barn owls feed predominantly on gwts, there may be a higher nest failure rate.



John Lusby BWI (left) identifying small mammal remains with Mary Nolan, Kilsheelan (mid right). Shona Foley, Fethard (rear right) and Andrew Harrington, WCC (front right).

Following a coffee break, Peter Turner (WIT) spoke about the use of DNA technologies in the MISE project and illustrated the use of DNA techniques to identify small mammals from kestrel pellets. Kestrel pellets are more difficult to physically analyse as the kestrel break down the bones of the small mammals into small fragments. However, DNA techniques can rapidly and relatively cheaply identify the species. Similarly, pine marten scats can also be used to identify the remains of small mammals. Such collaborative and interdisciplinary approaches will help give a greater understanding of distribution of small mammals in Tipperary and neighbouring counties.

After lunch, there was a practical workshop where the participants learned to break apart owl pellets and to identify small mammals by variations in the skulls. John and Dave skilfully pointed out the subtle morphological variations and illustrated the use of an identification key. Within the pellets, the remains of pygmy shrew, woodmouse, housemouse, rat, gwhs and bank voles were discovered.



Adam Condon (Thurles) examining shrew teeth under a microscope

The final part of the event was conducted on the grounds of the Hotel Minella where David Tosh demonstrated small mammal trapping techniques using live traps. A bank vole was trapped along a hedgerow and David illustrated the correct method to handle a small mammal by the scruff of the neck. Finally, Andrew Harrington (WCC) demonstrated the use of hedgehog tunnels that can be used to monitor hedgehogs and other small mammals. The tunnels are baited with food and ink pads are placed alongside white paper that records the footprints of various small mammals. The day was a great success and enjoyed by all involved. For more news and up coming events from the MISE Project, visit our website and find us on Facebook and Twitter.



David Tosh, (QUB) demonstrating live mammal trapping