Newsletter I March 2012

Vincent Wildlife News

If you think you have seen a pine marten in England or Wales, please phone us now on 01531 636441

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Nearly four years have passed since the VWT's staff and trustees agreed on a new business strategy for the Trust.

What was agreed was a combination of proactively promoting the work of the Trust, seeking out valuable partnerships and launching a fundraising strategy that would gain extra funding for project work. We also agreed to widen our work to embrace other mammal species that could also benefit from our approach.

Since then, we have clarified our approach into three themes: Innovation, Application and Inspiration. This builds on our historical work with otters and water voles and now, more recently, with horseshoe bats and the pine marten. As you will see from the MISE project, we are now working on stoats and weasels and investigating harvest mouse detection techniques.

Having reviewed all of our work recently, I am pleased to say that we are making good progress in all areas, but that's just from our perspective! I'd be very interested to hear from you, our friends and colleagues, on how you think we are doing and whether it's enough.

If you are interested in giving your views please email me at nataliebuttriss@vwt.org.uk. I don't intend to issue a formal questionnaire, but I would be interested in your personal views, all kept in confidence of course.

Much of our work has a very practical aspect to it - we have over forty roosts that we care for, many quite old and complex buildings. These are maintained by three staff. Visiting these sites regularly to check they are OK can be time consuming but is a necessity to ensure they are in good condition for the bats. If you live near to our roosts in Wales or the south west of England (email us to check) and have any spare time to make a few short visits to these roosts, please get in touch. Emergence counts can also require additional volunteers: a wonderful opportunity to see the bats close up.

I hope you enjoy reading about the rest of our current work in this e-newsletter. Do let Hilary, our Communications Manager, know if there is anything you would like covered in future issues.

Natalie Buttriss
Chief Executive Officer

Bryanston Reserve, Dorset [Part 2]

By Colin Morris, Nature Reserves Manager

In the last edition of this newsletter, Colin Morris wrote a piece about our Bryanston Reserve. If you would like to read this article, please go to:

http://www.vwt.org.uk/docs/ezines/vwt-e-newsletter-july-2011.pdf?sfvrsn=4

One of the Trust's greatest strengths is its management of buildings for bats. Even before the Trust purchased Bryanston, it had been improved on numerous occasions for the benefit of the bats. In the late 1970s , the traditional wooden and slate roof was removed and replaced with a modern steel and asbestos roof. Straight away a problem with internal temperatures meant the bats failed to breed. To overcome this, artificial heating in the form of greenhouse heaters were installed, and the following year bespoke industrial electric blankets were fitted. The result was that breeding resumed.

Although the site was first notified as a Site of Special Scientific Interest (SSSI) as a breeding roost in 1977, small numbers of bats regularly hibernated there in secluded parts of the building. However, the vast majority of the animals left the building and flew many miles to find more suitable places to hibernate. Many bats flew south (and still do) to the old stone mines in Purbeck, and occasionally animals flew across to the Isle of Wight. Some flew north to more industrial excavations near Chilmark (Wiltshire) and Bath (N. Somerset). One intrepid individual flew west to south Devon. Collecting this information was made possible by some of the first bat-banding (or ringing) to be carried out in the country.

In 1989, to encourage more bats to stay at Bryanston, the world's first artificial cave for hibernating bats was dug into solid rock. Under the direction of Dr Robert Stebbings, volunteers from the Dorset Bat Group assisted by Maurice Webber dug a 12 metre 'T-shaped' tunnel - removing over 40 tons of chalk in one weekend. The tunnel was extended a few years later and from a handful of individuals hibernating in the past, up to 200 animals now overwinter in the tunnel. In 1999 a second, much larger tunnel was excavated.

Fig.1 *Construction of the world's first artificial cave in solid rock for hibernating bats*

After the Trust purchased the site in 1994, the first major project was the removal of the asbestos sheeting roof, to be replaced with a traditional slate roof.

Although a slow process, the number of adults returning to breed has doubled and the number of juveniles being born has more than quadrupled.

Fig.2 *The 'new' slate roof*

Newly planted hedge in 2000 (above) and the same hedge in 2008 (below).

Of course it's not just the buildings that need to be maintained and improved, the surrounding habitat is equally important: it's no good having a five star hotel if it doesn't have a decent restaurant nearby. Over the intervening years, many hedgerows have been planted to enable the bats to forage in areas that were previously inaccessible to them. These hedgerows are allowed to grow tall and bushy (mushroom-shaped) to enable the bats to use their passive hunting strategy of fly- catching: basically hanging from a small overhanging twig and pouncing on moths or insects that happen to fly past.

Except for the recent replacement of the electric blankets with modern greenhouse heaters (the blankets failed after only thirty years), there is very little else in the pipeline to improve the building for the bats. In the future, most, if not all, of the improvements will concentrate on improving or maintaining the surrounding feeding, foraging and commuting habitat.

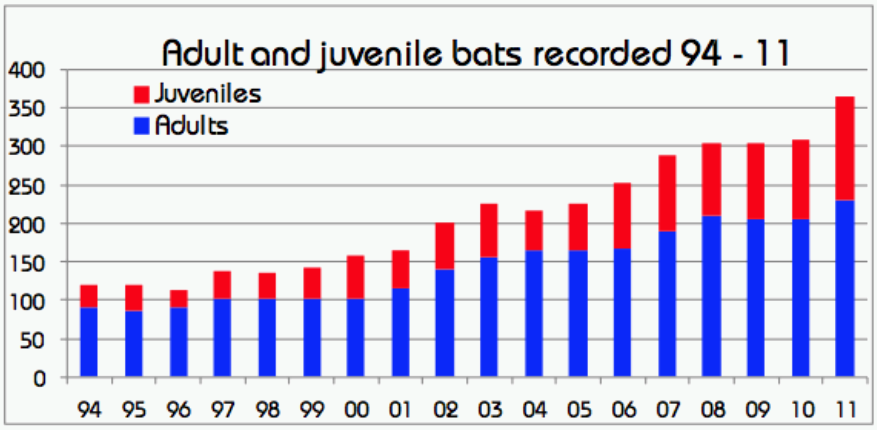

***Fig.3** Total number of adults and juvenile bats at Bryanston*

Going nuts for dormice

By Dr Jenny Macpherson, MISE Project Officer.

The MISE (Mammals in a Sustainable Environment) project ran a number of dormouse nut hunts at the end of 2011, where volunteers came along and learnt how different species of small mammal open hazelnuts in different ways. Dormice leave distinctive tooth marks when they gnaw into hazelnuts and volunteers were asked to comb the woods in search of the discarded kernels that prove that dormice are present. Volunteers were also shown how to tell the difference between nuts that have been nibbled by dormice and those opened by bank voles, wood mice and squirrels. They then spent the day searching for hazelnuts that had been opened in the distinctive way that indicates the presence of dormice. As a result of these we found two new sites in Carmarthenshire with dormice present.

Spotlight on a key partner...

The Waterford Institute of Technology,Ireland

By Lizzie Croose

Projects Support Officer

Waterford Institute of Technology (WIT) is one of the largest institutes of technology in Ireland with an established research and innovation centre progressing pioneering work in a variety of areas, including eco-innovation. WIT is the lead partner in the Interreg-funded Mammals in a Sustainable Environment (MISE) project, of which The Vincent Wildlife Trust and four other organisations are partners.

Dr Peter Turner and Dr Catherine O'Reilly work in the Molecular Ecology Group at WIT and have developed a range of novel DNA analysis techniques to monitor a wide range of mammals. Much of their research has focused on the pine marten and Pete and Catherine have developed pioneering methods to collect hair samples and to analyse faecal and feeding remains.

Pete has used these methods to further investigate pine martens and is undertaking an ongoing census of martens in his local woods using scat collection, hair samples from baited hair tubes and live trapping. DNA analysis from these samples has allowed Pete to study the behaviour and demography of this pine marten population.

As well as pine martens, the Molecular Ecology Group has also undertaken research on water voles, red and grey squirrels and bat species and Pete and Catherine have supervised many PhD studies on these and other species.

WIT's pioneering work on mammal DNA has significantly progressed the work of VWT and other wildlife conservation organisations, through the development of DNA-based non-invasive sampling methods, which allow us to learn so much about the species we study. DNA analysis can provide vast amounts of data on mammals, including species identification, sex, origin, diet and can even help the identification of individual animals through genotyping.

VWT's collaboration with WIT began several years ago when the Trust began exploring the use of DNA analysis in pine marten scat surveys. Subsequently, thousands of scats have been sent by the Trust across the Irish Sea to WIT for DNA testing. The Trust has also collaborated with WIT on a molecular comparison of historical and contemporary pine marten populations in the British Isles.

This research involved analysing DNA from both historical pine marten populations through the sampling of museum specimens, and current pine marten populations from England, Wales, Scotland and Ireland, to determine the origin of extant pine marten populations and implications for conservation management.

Currently the VWT is working with WIT on a range of mammal species as part of the MISE project. This work includes species identification of small mammal droppings collected in bait pots, analysing hairs collected in stoat and weasel hair tubes, dietary analysis of otter spraints, and analysis of squirrel hair samples to determine the

distribution of red and grey squirrels. By the end of this collaborative project, we hope to have a much clearer picture of the distribution and status of rare mammals in Wales and more information on how we can conserve these species for the future.

To find out more about the work of WIT's Molecular Ecology Group, see their website - http://www.wit.ie/research/

Our work at Nietoperek, Poland

Hibernating Natterer's bats with a Bechstein's bat

By Dr Henry Schofield
Conservation Programme Manager

Prior to World War Two, Germany constructed an extensive system of defences along its then eastern border with Poland. Part of these fortifications consisted of heavily armoured bunkers connected and supplied by 32 kilometres of passages and railway tunnels 20 to 50m below ground. A series of subterranean railway stations, storage chambers and rooms to accommodate troops completed the system.

Following the war, changes to country borders saw the system taken into Poland. Much of the above ground fortifications were destroyed and the underground system was stripped of its infrastructure. Since then, the underground system has been adopted as a hibernation site by bats. Nearly 40,000 bats have been recorded over-wintering at the site, including some of Europe's rarest species; animals are drawn from across Poland and from as far away as the Czech Republic.

The importance of the site was realised in the 1980s and part of the system was established as a bat reserve, named after the nearest village, Nietoperek. It is now recognised as the largest and most important bat hibernation site in northern Europe. More recently, the entire underground system and the surrounding wetland habitat were given European protection when they were designated as a Natura 2000 site. The predominant species in the system is the greater mouse-eared bat *(Myotis myotis)*, which can form clusters on the sides of the tunnels and chambers numbering hundreds of individuals. Barbastelles are common in the cooler areas of Nietoperek, where thousands can be seen roosting individually or in dense clusters. Daubenton's, Natterer's and brown long-eared bats make up the bulk of the commoner species with rare European species such as Bechstein's bats and pond bats found in relatively small numbers.

The need to monitor the site led to the setting up of an annual census of the bats; this is led by Dr Tomasz Kokurewicz of Wrocław University of Environmental and Life Sciences. The Vincent Wildlife Trust has been a partner helping deliver the annual census of the hibernating bats and also assisting in carrying out small scale research projects at the site aimed at informing the management of the reserve. The Trust's Henry Schofield first visited Nietoperek in 1992 and when the annual census of the system was established in 2005 he was contacted by Tomasz, with a request to assist in the work. In recent years, VWT staff members Lizzie Croose and Colin Morris have also taken part in the census.

The census itself is a major undertaking with 32 kilometres of tunnels to be walked and many thousands of bats to be counted in one day. About 70 participants, from the main Polish universities and from across Europe, gathered on a Friday in early January to take part.

Greater mouse-eared bat cluster

Surveying chamber

Our work at Nietoperek, Poland cont'd

The evening was spent with briefing and planning sessions before people try and get an early night in preparation for a 4:30am start on the Saturday morning. The system was divided into nine sections and groups assigned to each one, entering the tunnels just before dawn and making their way to their allotted sections. Counting the bats took most of the day and often involve a long and arduous walk.

During the late afternoon and early evening the groups gathered back at the base in a small hotel close-by to collate the results and discuss their findings. Each of the group leaders reported back and Tomasz and his students produced a final tally. The results and trends were enthusiastically discussed during the social evening that followed.

Predation by Pine and Stone Martens

The presence of bats in the system has proved a draw for local predators and most notably martens. Marten scats can be found in many of the tunnels at Nietoperek and studies by Polish scientists have shown that they contain bat bones. It had been assumed that they were scavenging dead and moribund bats from the floor of the tunnels. However, whilst putting up cameras to monitor marten activity in tunnels in 2009, Henry Schofield, Neil Jordan (VWT's Prospects for Pine Martens Project Manager until 2011) and Johnny Birks (Swift Ecology) found marten paw prints on the walls where metal straps provided a way for the martens to climb up to where the bats were hibernating. It became clear that the martens were actively hunting for bats.

In summer 2011, Henry Schofield and Jenny Macpherson visited the site with Peter Turner from Waterford Institute of Technology (WIT) to assess the marten situation. Scats were collected from a few areas of the system for genetic analysis to determine which species were using the tunnels and to assess whether the quality of the DNA was sufficiently good to allow individuals to be identified.

The preliminary results showed that both pine marten and stone marten were in the system and that the quality of samples should allow the identification of individual animals. Over the winter of 2011/12 the entire system is being surveyed for marten scats and a collaborative project between WIT, Wrocław University of Environmental and Life Sciences and VWT has been established to map the underground territories of the martens and to use further genetic analysis to determine the bat prey species.

An entrance to the Nietoperek bunkers

Harvest mouse survey training day

By Dr Jenny Macpherson, MISE Project Officer.

In November 2011, the MISE project, in conjunction with Chester Zoo, ran a harvest mouse survey training day for volunteers and professionals working in Wales. It was great to learn more about this tiny but charismatic animal, which is Britain's smallest rodent and weighing only 5g – the same as a 20p coin. As part of the training day we carried out a nest survey on one of the zoo's fields by a canal and found several nests. This shows that harvest mice are still present nine years after zoo staff carried out a reintroduction at the site.

Lizzie with a field vole caught in a harvest mouse trap

Practical conservation for red squirrels

On 11th February a class of sixth formers and their teacher from Amman Valley School spent the day with the MISE project planting trees and putting up nest boxes to benefit the red squirrels in the Tywi forest in mid Wales.

Students at the school grew lodgepole pine and scots pine from seed, as part of their horticulture course. They have chosen to grow these species because they provide a good food source for red squirrels.

Pine marten news update **Pg.8**

Greater horseshoe bat roost gets deserved recognition **Pg.10**

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Pine marten news update


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By Lizzie Croose
Projects Support Officer

Over the last few months we've had several reliable pine marten sightings reported to us. Notable sightings include a pine marten that was observed eating a dead buzzard at Thirlmere in the Lake District, and a marten seen crossing the road in Dalby Forest, north Yorkshire. Other sightings have been reported from Dyfi forest in mid Wales, the Brecon Beacons and Ceredigion.

The Pine Marten Strategy Group is making progress on priority actions identified in the Pine Marten Conservation Strategy. Members of the group, who include statutory bodies, wildlife NGOs, forestry workers and consultants, have been discussing how to progress these tasks. Key priorities include producing habitat management guidelines for land where pine martens are present, undertaking habitat modelling to compare habitat and other environmental factors that may affect marten abundance in England and Wales and undertaking a national pine marten survey of Scotland to ascertain up-to-date distribution data.

We are also continuing to assess the distribution of martens in England and Wales, and have recently installed a new design of hair-tube in woodlands in west Wales as part of the MISE project.

Have you seen a pine marten in England or Wales? If so, we're very keen to hear about it. Please report it to us by visiting: www.vwt.org.uk or phoning 01531 636441

Our Beacon for Bats

Introducing our new Our Beacon for Bats Officer

Dr Jane Sedgeley joined the Trust's team at the beginning of January 2012 as the new Our Beacon for Bats Project Officer. Jane has worked for a number of conservation organisations around the world and has been involved in projects focusing on a range of endangered species including amphibians, lizards, small mammals, forest birds, penguins and albatross. However, Jane specialises in bats and climbed around 400 trees to gain her PhD on the roosting ecology of bats! Jane led a five-year programme investigating the threats to bats in rural New Zealand working closely with farmers, landowners, as well as local landcare and conservation groups to implement a local bat recovery programme.

More recently, Jane was one of the local coordinators in the Bat Conservation Trust's Bechstein's bat project which successfully used volunteers to undertake a national survey.

These experiences are very relevant to Jane's role in the OB4B project, where she is working with local people, wildlife organisations, schools and community groups to raise awareness of the importance of lesser horseshoe bats in the upper Usk Valley. The diary is rapidly filling up with several events planned especially for schools, bat walks to help celebrate the 200th birthday of the Brecon & Monmouthshire canal, emergence counts at bat roosts and bat detector training sessions. There will also be regular survey evenings throughout the summer for volunteers to assist with work along the canal and hedgerows using bat detectors to identify important bat flyways.

Dr Jane Sedgeley
Our Beacon for Bats Project Officer

More information about this project and forthcoming events is available on the VWT website: ***http://www.vwt.org.uk/our-work/projects/our-beacon-for-bats*** or contact Jane directly for more details, including opportunities to volunteer.

A lack of hibernation sites may be a limiting factor for lesser horseshoe bats in the upper Usk Valley. Please contact Jane Sedgeley if you know of any icehouses, unheated cellars or World War 2 pillboxes in the area.
Tel: 01874 623724 Mobile: 07584 416502

Greater Horseshoe Bat Roost recognised

By David Jermyn
Reserves Officer, Wales and the Marches

The VWT manages an internationally important greater horseshoe bat roost near Cardiff. Just before Christmas we heard that the site has been notified by Countryside Council for Wales as a Site of Special Scientific Interest. This is very good news.

The site is one of only five known nursery roosts of this rare bat species in Wales, and the only one in south-east Wales. An old generator block provides a summer nursery roost, whilst the cellars in another building provide a hibernation site during the winter months for both greater and lesser horseshoe bats. The piece of woodland just to the north of the roost, also notified as SSSI, is well-used by the bats for foraging and commuting to more distant feeding areas.

During the annual summer roost monitoring period, a record 157 adult bats were recorded using the roost. This compares with a total of 30 recorded using the roost when the Trust took on the management in 2004. In Britain, the breeding population is confined to southern Wales and south west England, with an estimated population of probably no more than 10,000 animals.

Launch of new bat conservation organisation in Europe

The VWT's Dr Henry Schofield has been appointed a Trustee of Bat Life Europe.

Bat Life Europe was launched at the 2011 European Bat Symposium in Lithuania. It is an international non-governmental conservation organisation built from a partnership of national bat conservation organisations that are committed to promoting the conservation of all bat species and their habitats throughout Europe.

The broad aim of Bat Life Europe is to promote the conservation of all wild bat species and their habitats throughout Europe, for the benefit of the public.

Key priorities will include:

- Facilitating international communication and knowledge sharing
- Identifying European conservation priorities
- Developing pan-European projects
- Developing best practice guidelines
- Co-ordinating action in relation to special threats
- Collecting and managing data

VWT's Kate McAney and Henry Schofield at the launch of Bat Life Europe in Lithuania in August 2011

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Easy fundraising!

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