



Vincent Wildlife Trust

Newsletter

Vincent Wildlife Trust Newsletter | December 2018 | Issue 11

VWT Ireland launches pinemarten.ie

A national resource about pine martens in Ireland **p12**



Our staff

Head Office (Ledbury, Herefordshire)
Dr Lucy Rogers
Chief Executive
lucyrogers@vwt.org.uk

Hilary Macmillan
Head of Communications
hilarymacmillan@vwt.org.uk

Angela Powell-Stevens
Head of Business and Finance
finance@vwt.org.uk

Lizzie Croose
Senior Science and Research Officer
elizabethcroose@vwt.org.uk

Julia Bracewell
Design and Communications Officer
juliabracewell@vwt.org.uk

Gemma Fisher
Volunteering and Community Engagement Officer
gemmafisher@vwt.org.uk

Helen Henderson
Business and Finance Officer
helenhenderson@vwt.org.uk

Tom Kitching
Bat Conservation Officer
tomkitching@vwt.org.uk

Marina Bollo Palacios
Bat Conservation Officer
marinapalacios@vwt.org.uk

Gloucestershire
Dr Steve Carter
Carnivore Programme Manager
stvecarter@vwt.org.uk

Worcestershire
Dr Anita Glover
Bat Programme Manager
anitaglover@vwt.org.uk

N England
Kevin O'Hara
Pine Marten Project Officer *Back from the Brink*
kevinohara@vwt.org.uk

Wales
Dr Henry Schofield
Head of Conservation
henryschofield@vwt.org.uk

Dr Jenny Macpherson
Science and Research Manager
jennymacpherson@vwt.org.uk

David Bavin
Pine Marten Project Officer
davidbavin@vwt.org.uk

Josie Bridges
Pine Marten Project Officer
Community Engagement
josiebridges@vwt.org.uk

Ireland
Dr Kate McAney
Head of Conservation Development – Ireland
katemcane@vwt.org.uk

Ruth Hanniffy
Ireland Projects Support Officer
ruthhanniffy@vwt.org.uk

Welcome

from Vincent Wildlife Trust's CEO, Lucy Rogers



As the new CEO at VWT, I have found my first year both busy and exciting. I have really enjoyed getting to know the staff and their work, and feel very lucky to have such a talented and dedicated team.

This year has seen many highlights, some of which are included in this winter newsletter.

- The first ever video footage of a pine marten in Northumberland spotted by volunteers working with our *Back from the Brink* Pine Marten Project Officer, Kevin O'Hara. Since then, the number of confirmed pine marten records in Northumberland and Cumbria in 2018 has leapt to 30.
- Our Rheidol Railway 'Pine Marten Den' has been attracting many visitors, who have also taken over 3,000 leaflets from the Den since its opening in June.
- In Ireland, our team Kate McAney and Ruth Hanniffy, with Julia Bracewell, have developed a pine marten information website, www.pinemarten.ie, which has been funded by the National Parks and Wildlife Service.
- We were delighted that Chester Zoo won a Conservation Gold Award from the British and Irish Association

of Zoos and Aquariums (BIAZA) for their work on our Pine Marten Recovery Project (PMRP). Chester Zoo is a major partner in Vincent Wildlife Trust's PMRP. To help Wales's pine marten population recover, the project has translocated 51 pine martens to woodlands in mid-Wales over the past three years. Chester Zoo was integral to the translocation and releases, and played a major part by constructing and installing release pens for the pine martens.

- An exemplar pine marten viewing hide has been built in private woodland in mid-Wales, which is a first for Wales. Once again, Chester Zoo provided the building expertise.
- The trial of Mostelas as a monitoring tool for stoats and weasels, stoats (and mink) being detected.

- We take care of around half of Britain's greater horseshoe bat population by managing our reserves in a variety of strategic locations.
- Our bat research has produced some highlights this year, including development of a new genetic technique for monitoring bat populations. We are also investigating the detrimental effect of traffic noise on foraging bats at the landscape scale.
- We are delighted to welcome four new staff to VWT this year: Helen Henderson, Julia Bracewell, Marina Palacios and Tom Kitching, bringing between them, new skills, experience and expertise in business, design and bat ecology.
- Our staff continued to forge strong links with partners at home and abroad, and to facilitate more effective conservation.

Meanwhile I have been concentrating on building on the strong legacy left by the previous CEO, Natalie Buttriss, to take the charity through its next developmental phase and to

play an integral role in changing the fortunes of British, Irish and wider European mammals at risk. Over the next ten years, we are going to be extending our reach and impact to prioritise a greater range of species over a larger geographic area; working increasingly at a landscape scale, and across Britain, Ireland and mainland Europe. Our list of mammals at risk has not decreased, and right now we are looking at how

we can work on a greater range of bat species that may be in trouble, as well as a wider range of medium-sized carnivores, such as the wild cat and European mink.

So keep watching, and hopefully next year we will be reporting back on an even greater range of species and projects.

In this issue



VWT Ireland launches pinemarten.ie

A national resource about pine martens in Ireland p12



Mink on the Brink

Actions to prevent the extinction of European mink p16



Two firsts for pine martens in the North

Exciting first pine marten records in Northumberland and Cumbria p14



Ringing bats to age a colony

Long-term ringing project to help age a colony of rare tree bats p22

Also featured

A warm welcome to four new staff p4

Assessing the Pine Marten Recovery Project p6

Clan animals and collaborations p8

The first pine marten viewing hide in Wales p10

Go Wild Nature Camps p13

Mostelas progress the weasel conundrum p15

A year of volunteering triumph p17

8th Colloquium on Squirrels p18

A first for the bats of Eastern Europe p20

An update of PhD research projects p21

Contact us

Vincent Wildlife Trust,
3&4 Bronsil Courtyard,
Eastnor, Ledbury,
Herefordshire HR8 1EP

01531 636441
enquiries@vwt.org.uk
www.vwt.org.uk

A warm welcome to four new VWT staff

Helen Henderson
Business and Administration Officer



I joined the Trust recently as Business and Administration officer, but have already become engrossed in the fascinating world of wildlife conservation unfolding around me in the office every day.

My recent work background is mainly in administration. Before Vincent Wildlife Trust, I worked for a local not-for-profit organisation, Active Training and Education (ATE) which is involved in promoting learning through play for children, and I have also held similar administrative roles previously in education and retailing.

I love the great outdoors. I have a degree in Geography from Southampton University and following the completion of an HNC in Horticulture at Pershore College, I worked for almost a decade as a professional gardener. I therefore have complete empathy for my outdoors VWT colleagues, having been stood holding a ranging pole or spade for long hours in the pouring rain! I also spent many years working in high technology marketing with organisations such as Apple, Lotus Development (now

part of the IBM Software Group) and Intel Corporation. Of course, this means that every time anything goes wrong in the office with something involving a plug or a microchip, people tend to look expectantly in my direction! I look forward to supporting my VWT colleagues in continuing the important research and conservation work they do.

Marina Palacios
Bat Conservation Officer



I am delighted and very grateful for the opportunity to be part of Vincent Wildlife Trust.

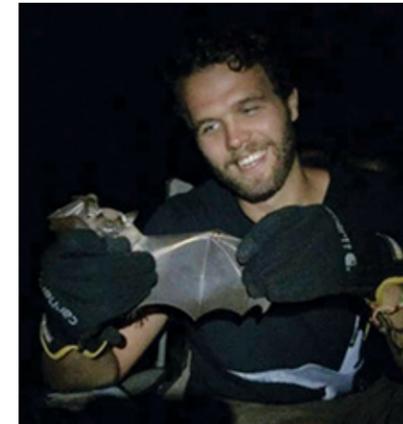
I learnt about the Trust three years ago when I was a volunteer for the RSPB in the Highlands, and where I was lucky enough to live in a place where I could see pine martens from my living room. I became interested in them and, researching online, I found out about the work of VWT. As a result, I knew that, as a biologist, Vincent Wildlife Trust

was an organisation worth working for. To be appointed as a Bat Conservation Officer is something I really appreciate, and I will work hard to exceed expectations.

I have always found bats fascinating and I am excited that I am going to take part in bat research and conservation.

I graduated with a degree in Biology in 2013 and obtained an MSc in Biodiversity and Conservation at the University of Sevilla, my home city in Spain. Then, I volunteered for various conservation projects with different conservation NGOs in Scotland, England, Wales, Portugal and Spain, mainly related to bird conservation. In my last contract, I worked as a Research Assistant studying breeding success, migration and malaria prevalence in populations of barn swallows in southern Spain. As part of this contract, I was given the opportunity to take part in an expedition to the Peruvian Amazon to study malaria in birds and reptiles last summer. I enjoy learning and taking on new tasks and responsibilities. I am very excited about my new role and looking forward to delivering all the exciting bat conservation projects.

Tom Kitching
Bat Conservation Officer



First things first. It's a privilege to be given the opportunity to work for VWT and I'm excited to be joining the team.

I've been studying and working in conservation biology for about five years now and, in that time, I've tried my hand at working with a few different taxonomic groups for different NGOs. Most of my work with bats so far has been abroad, so it's nice to be back on home soil.

I started out studying African ungulates in 2013 and, since then, I've taken part in other projects involving African mammals and birds, but I've also spent some time in the Americas, working in tropical and desert ecosystems. I completed my MRes degree at the University of Leeds in 2017. As my final research project for this, I conducted a distribution modelling study of Mexican bats in the Baja California peninsula and that was when I was first given the opportunity to work with bats. I haven't stopped since!

In the latter part of 2017 and into 2018, I worked in Malawi, conducting bat-orientated biodiversity monitoring surveys. Most recently, I was working in Romania on a volunteer-driven bat monitoring scheme in designated catchment areas around Saxon-era fortified churches within a large Natura 2000 region of Transylvania.

I'm really excited about the opportunities for new bat projects with VWT and it's great to be part of a respected conservation and research charity.

Julia Bracewell
Design and Communications Officer



I joined the Trust at the beginning of September as the Design and Communications Officer, and immediately felt at home in the world of conservation, science and publications... and in front of a Mac.

Since graduating with a degree in botany from the University of Manchester, I have spent most of my career working for conservation and development charities, in both education and in the production of publications. And in between, I have worked in schools as a secondary science teacher and as a primary school class teacher. I also enjoyed a short time in the molecular biology department of a Food Research Institute in Norwich.

I have worked for Kent Wildlife Trust as Education Officer where

I helped develop the education programme, before taking on the role of Publications Officer and producing a range of education and marketing materials. Wanting to develop my skills and experience in the production of publications, I joined Christian Aid as a writer and editor where, as well as developing my skills, I came to understand the importance of connectedness in order for both people and planet to survive and thrive.

Working in an office in London, I missed being in the natural environment and so I joined a small environmental and development charity based on an organic dairy farm, to help to develop the education programme and the marketing through publications. During this time, I took the opportunity to complete an MSc in Creative (non-fiction) Science Writing at Imperial College, which was a joy.

It is such a treat to be working for an organisation that combines science and conservation with a deep respect for meaningful communications, and I hope I can make a positive contribution to the future of wildlife conservation through the work of Vincent Wildlife Trust.

Assessing the Pine Marten Recovery Project

David Bavin, Pine Marten Project Officer



There has been time this summer for reflection on the achievements of the Pine Marten Recovery Project (PMRP) so far, and to think ahead to our future plans.

This summer seemed oddly quiet. We were, of course, working hard on the project, but for the first time in three years we were not busy making preparations to translocate pine martens from Scotland to our project area in mid-Wales. This gave us time in the summer to take stock, make some cursory evaluations, and think about the direction of the project in the near future.

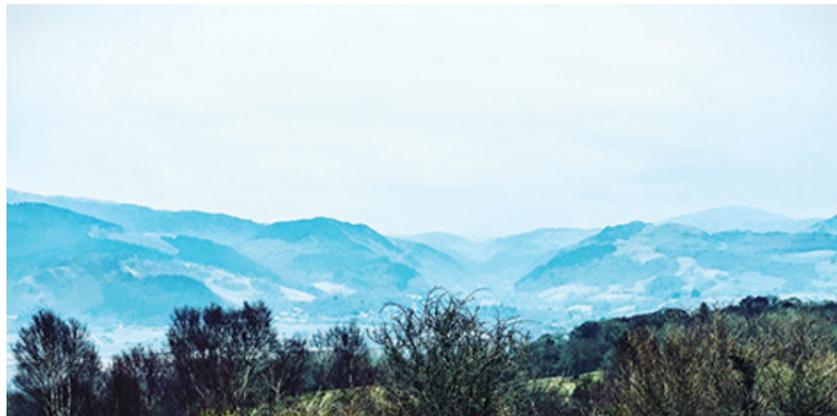
So where do we stand? In the broadest terms we have established a population of pine martens in mid Wales from 51 founders that were brought down from Scotland over the last three years. We are hesitant to call it a success at this early stage as the animals are distributed over a large area, live at very low density, and are therefore still vulnerable to 'stochastic' effects: the indifference of random events within the environment. For example, in such a thinly spread population, vehicle collision or predation could

potentially extinguish key links between territories, resulting in geographically isolated individuals. The martens, however, may respond to this by re-distributing to fill in the gaps. We don't know, but the imperative to breed is a strong driver. Fortunately, we have a cluster of territories around our release sites that represent the population core, where they live at a density more reflective of areas in the UK in which they are long established.

Aside from the population's establishment, we have satisfied a number of short-term success criteria set out at the beginning of the project. We managed to keep track of the majority of animals, and provided a wealth of information on their dispersal, establishment, denning ecology and foraging behaviour. We have also collected almost two hundred fecal samples, which are being used for dietary analysis by Catherine McNicol at the University of Exeter.

Our survival rates have been good, better in fact than anticipated, though once the animals have had their radio collars removed, we are unlikely to know their fate. What we do know is that a significant

proportion of the females have bred. Giving birth to kits the spring after they have been translocated is one thing (they would have carried through a pregnancy conceived in Scotland), but we have had at least six females go through the full breeding cycle of courtship, mating, pregnancy and giving birth in Wales. It's even possible, though not yet confirmed, that we have an 'F2' generation; kits born to a female who was herself born and raised in Wales by one of our founding females, PM11 or PM16. Most pleasing of all was Josie's discovery that Miss Piggy, a particularly characterful individual (featured in the publicity for our partner Chester Zoo's Act for Wildlife campaign, and Josie's blog 'Miss Piggy's year') has grown up, and raised two youngsters of her own. So, as it stands, we consider ourselves to be breaking even, or perhaps, if we're being optimistic, in the black. But, it is important to remember that the martens are distributed throughout the entire range of the Cambrian mountains, and have large roaming areas, which makes it difficult to keep track of all the individuals from the three translocated populations and their offspring.



The translocated pine martens have the entire range of the Cambrian mountains to set up their territories and establish themselves as Welsh martens

The near future involves more non-invasive monitoring of the population, for which the community-led initiatives being developed by Josie, such as den box monitoring, camera trapping and hair tube surveys are key.

We will undertake the first step in the process of mapping the populations' expansion, as we do in Scotland. Within this broad geographic approach, we will focus on the core mid-Wales population to gather crucial demographic data that will inform the population's conservation, such as: number of kits born; the individual animals that are contributing to the gene pool, the population turnover, etc.

It is also a high priority for us to monitor and study any ecological changes that may occur as a result of the pine marten's recovery. We are working with partners who have expertise in environmental monitoring to detect any impacts, and we are collaborating with the RSPB to develop pre-emptive mitigation for species of conservation concern, such as dormice. We don't anticipate negative impacts on vulnerable species, as we carried out a thorough environmental risk assessment during the feasibility stage, but it is better to be prudent and prepared. This was the case for an osprey nest on Welsh Government land, where we worked closely with Natural Resources Wales to develop and install some marten proofing: a large inverted collar and removal of lower branches on the nest tree. As part of this monitoring phase and partnership work, and in anticipation of the spread of the martens, we provided a two-day Pine Marten Monitoring workshop for the rangers and volunteers of Brecon Beacons National Park, at Craig Y Nos Country Park. The training included practical sessions on installing den boxes and setting trail cameras, as well as identifying pine martens and their scats.



Trail cameras and hair tubes are a vital part of non-invasive monitoring for the Pine Marten Recovery Project, as are the many volunteers who regularly set and check them

Although we are reticent about labelling the project a success in these early stages, we can say with confidence that the future for pine martens in Wales looks bright, and we are at the beginning of

an exciting phase of learning, collaboration and, ultimately, recovery for one of our most iconic British species.



Clan animals and collaborations

Jenny Macpherson, Science and Research Manager



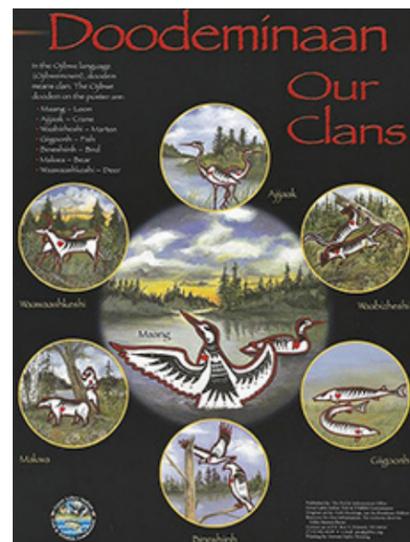
The 7th International Martes Symposium in Ashland, Wisconsin, offered different perspectives on the shared Martes complex, including the role of martens as important clan animals.

Way back in 2014, having begun working on VWT's feasibility study for pine marten translocations in Britain, I went to the International Martes Symposium in Krakow to talk about it. The room was full of renowned experts in the ecology and conservation of

species from martens to fishers to wolverines, and included many of the researchers who literally 'wrote the book' on all aspects of marten biology. The experience was daunting and inspiring in roughly equal measure. Everyone, however, was really helpful and positive about what we were trying to achieve back in the UK, and some of the people I met then have given me invaluable help and advice in the four years since. So, it was an enormous pleasure in July this year to set off to America to catch up with them again at the latest Martes gathering, and to present some of the results of the translocations to Wales.

The Martes Symposium is usually held every four years, alternating between Europe and North America, and covers the eleven species in the Martes complex. This year's symposium was held in Ashland, Wisconsin, near the shore of Lake Superior. We were welcomed by Mike Wiggins, chair of Bad River Tribe, who explained the significance of the marten as a clan animal for the Ojibwe people

of the Great Lakes. Each clan has a role or responsibility within the Ojibwe society and the marten, or Waabizheshi, clan is the clan of the warriors that would protect and defend the village from invaders. This was followed by a poem to celebrate the animal, a reminder that these charismatic little carnivores are culturally as well as ecologically important.



The different clan animals of the Ojibwe people, which includes the marten as protector and defender of the village

It is enlightening to view things from a variety of perspectives, and international conferences are always an eye-opener. As well as learning from the wide range of research and conservation projects going on elsewhere, it is fascinating to hear from people who are doing similar work to us but often under very different conditions. I didn't envy the speaker who described having to hike for eleven hours to reach her camera trap stations, which were mounted four metres up a tree to allow for winter snow depth. It made me think that perhaps our study sites aren't as remote as they sometimes seem, and even the worst of a Welsh winter is actually quite mild in comparison.

There was an interesting discussion during one of the sessions around the use of terminology. In the UK, we tend to refer to any resting site or structure that is used more than once, by a male or female marten, as a den. When North American researchers use the term 'den', they

specifically mean a site used by a female marten for breeding (what we would call a natal or breeding den). It was suggested that this could lead to some confusion. An example of two nations divided by a common language? There followed a very useful collaborative session focused on the need for standardised terms and developing methods to evaluate how den sites, or lack of them, may affect populations of fishers and martens.

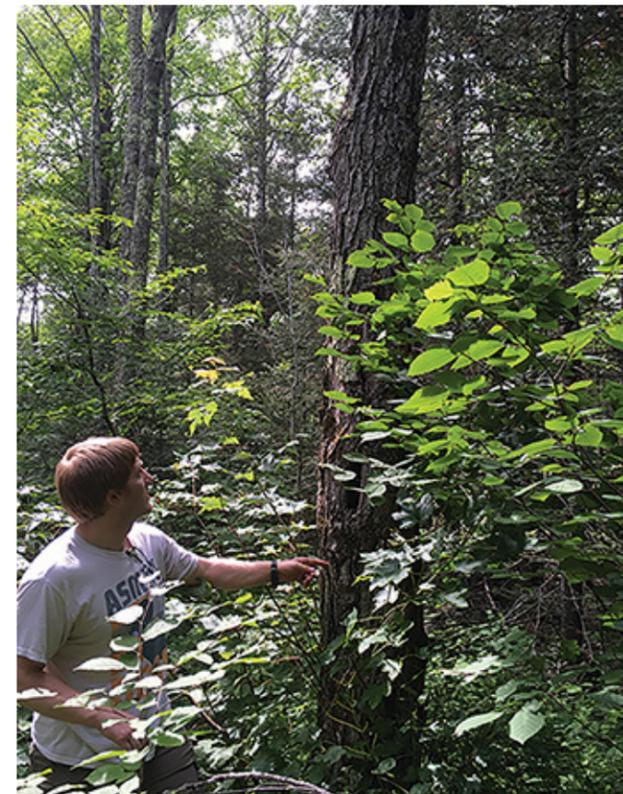
During the course of the symposium, a huge breadth of subjects was covered by the presentations. These included working with fur trappers on developing monitoring tools for harvested populations of martens; using genetic methods to evaluate bobcat and lion predation; reproductive success in wolverines; the incidence of anticoagulant rodenticides in fishers; and activity patterns of yellow throated martens in the Korean peninsula.

A book containing abstracts from all the presentations can be downloaded from www.martesworkinggroup.org



Group photo on Raspberry Island

It was a thoroughly enjoyable and productive week, establishing collaborations, developing friendships and furthering our understanding of current issues with many of the species in the Martes group. If any of this has whet your appetite to find out more about martens and their relatives, VWT will be co-hosting the European Mustelid Colloquium in Lisbon in 2019 and then the next International Martes Symposium in the UK in four years' time, so... watch this space.



Michael Joyce showing us some of the typical den (or resting) sites used by martens in his study area

The first pine marten viewing hide in Wales...

Josie Bridges, Pine Marten Project Officer — Community Engagement



With the translocation phase of the Pine Marten Recovery Project (PMRP) successfully completed, the team has been kept busy engaging with local communities and volunteers on monitoring projects, which are proving to be an invaluable part of measuring the success of the project.

Our biggest project this autumn has been the building of the first pine marten viewing hide in Wales. With the natural expansion in both population and range of our translocated martens, we don't think it will be long until businesses in Wales are going to try and replicate the success of Scotland's thriving ecotourism, where pine martens are often at the top of tourists' lists of 'must see' animals. In the Highlands, you can visit pine marten viewing hides, visit the Pine Marten Café and stay at B&Bs that promise a visit from pine martens during your stay.

The reason for building this hide was to create an 'exemplar hide', to encourage businesses wanting to replicate the Scottish experience, to undertake and promote 'responsible ecotourism', and in a way that does not change the

natural behaviour of these animals. Chester Zoo, one of the partners in the PMRP, very kindly offered to help us to build the hide, since they wouldn't be helping us build release pens this year. We had set aside three full days to clear the ground in the chosen woodland, construct, modify and paint the building, but it soon became clear that we had over-estimated our time. The team managed to get the hide standing within two hours, and it was generally decided that we would all rather build ten hides than one release pen. After construction, the windows were modified to open quickly and quietly so that photographers could get good photographs of the martens. We also created a shelf and a bench from the offcuts.



Fantastic team work with Chester Zoo to build the first pine marten viewing hide in Wales

The whole building was insulated with fibreglass and plywood to reduce noise and, of course, to keep in the heat during long evenings of waiting. We also had time to construct some feeding platforms.

Before we started the hide building project, we had caught, on camera, a marten visiting the site. We had assumed that he would be deterred by the myriad strange noises and scents of people and dogs that had been all over the site that first day, and wouldn't therefore return to the site. We were, however, happily surprised that he turned up at 6am on the morning of the second day of the build, running off with the pile of raisins and peanut butter we had left out for him.

... and news of Miss Piggy

Elsewhere in Wales, it has been tricky trying to keep a handle on the number of kits born this year. In previous years, we have been able to track our females to their den sites via their collars, and then place cameras and check den boxes. As the radio collars have now been removed, we have had to resort to more 'old school' methods of monitoring: by following up sightings, placing cameras on transects and checking the tops of den boxes for scats.

The poster marten for the PMRP project, Miss Piggy, had yet to breed. She was a young animal when she was translocated in 2015, and so we were not surprised that she didn't breed the first year. We were, however, disappointed when we checked den boxes in 2017,

that she again appeared not to have kits, despite being caught on camera with resident big male PM17 during mating season. Last summer, we once more captured her on camera with PM17, but in May this year we were again disappointed not to find kits when we checked the den boxes. The only intriguing evidence was a den box found piled high with scats. We continued to monitor her sporadically, using cameras throughout the summer, but were convinced she hadn't bred again. This was until last month, when we had to move a camera due to active forestry work. We set it up in a new spot up the river from her normal territory and where we had spotted some scats on the footpath.

We baited the site and within a week Miss Piggy had turned up on camera; she'll do anything for some free peanuts. We continued to check the camera throughout the month until one day we had a marten turn up who looked smaller, quite clumsy and generally different to Miss Piggy. What followed then was clip after clip of two martens together on camera, which is very unusual for this solitary species. Our immediate thought was that these two were littermates from this year and so we deployed a jiggle. This is a tea strainer filled with peanut butter on a flexible wire that causes the martens to 'meerkat' up towards it, giving us a perfect photo of their unique bibs. This showed that indeed these two martens were new, unknown martens, and when they turned up on camera with Miss Piggy later in the month, we knew they must be her offspring from earlier that year.

Hurray! The team were thrilled. It is, of course, a celebration whenever we confirm any kits, but these two felt especially important. Miss Piggy has been so closely followed by ourselves and Chester Zoo, that it was very special to confirm that she has contributed to the continuation

of her species. It helps that K(07)1 and K(07)2 seem to share their mother's love of food and regularly turn up on camera.

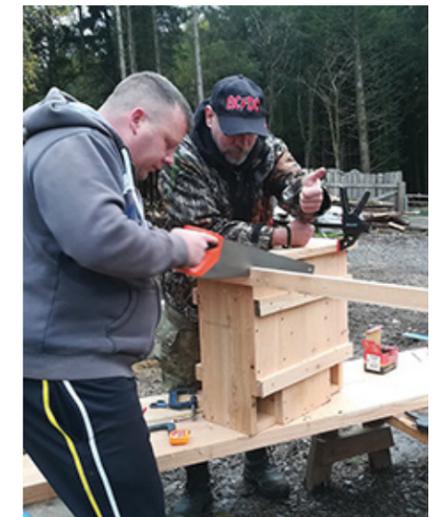


Miss Piggy's kits: K(07)2, female (top) and K(07)1, male (bottom)

In addition to monitoring our martens and recording kits, we have been running many den box and camera workshops beyond the core release area, to pave the way for the anticipated spread of the pine martens, and to ensure the continued monitoring of the population. Longwood Community Woodland had a number of cameras and hair tubes out over the summer, but did not capture

any conclusive evidence of marten activity. As a result, they have turned their efforts to building den boxes to try to entice pine martens into the woods. Their boxes are all made from larch wood, which has been harvested from their site, and they will install them over the winter.

The camera trap loan scheme has also been going from strength to strength, with 40 people monitoring cameras for us on a regular basis. They have been sending in their pine marten sightings, along with some other interesting species, including a stoat pinching an egg left out for pine martens, a buzzard and a grass snake.



Using local larch to create pine marten den boxes in Longwood Community Woodland

VWT Ireland launches pinemarten.ie

Ruth Hanniffy, Ireland Projects Support Officer



The pine marten, one of Ireland's most charismatic native mammals, has entered the digital age by having its own website.

The website, www.pinemarten.ie, is a national resource about pine martens in Ireland, and draws on expert knowledge from poultry keepers, foresters, farmers, pest control experts, gun clubs, NPWS conservation rangers and academics. It is the result of a partnership between Vincent Wildlife Trust (VWT) and the National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht.

Why does this mammal in particular need its own website? Although the pine marten has been part of the Irish countryside for millennia and is referenced in writings dating back to the 12th Century, by the 1970s, the animal had been driven close to extinction. Only a few relic populations in the west and southeast of Ireland remained, where once it had existed in every county. In 1976, pine martens were granted legal protection under the Wildlife Act which, together with an increase in tree cover, has made possible the slow recovery of the species.

Not to be overlooked, however, are the challenges that come with the recovery of a once-absent species. In Ireland, the spread of the pine marten has been marred by media reports that regularly print myths and misinformation about the animal and its diet. This can have damaging repercussions for the animals themselves and does nothing to deal with the problems being experienced by people encountering the species for the first time. Both VWT and NPWS have been dealing with an increasing number of calls from the general public,

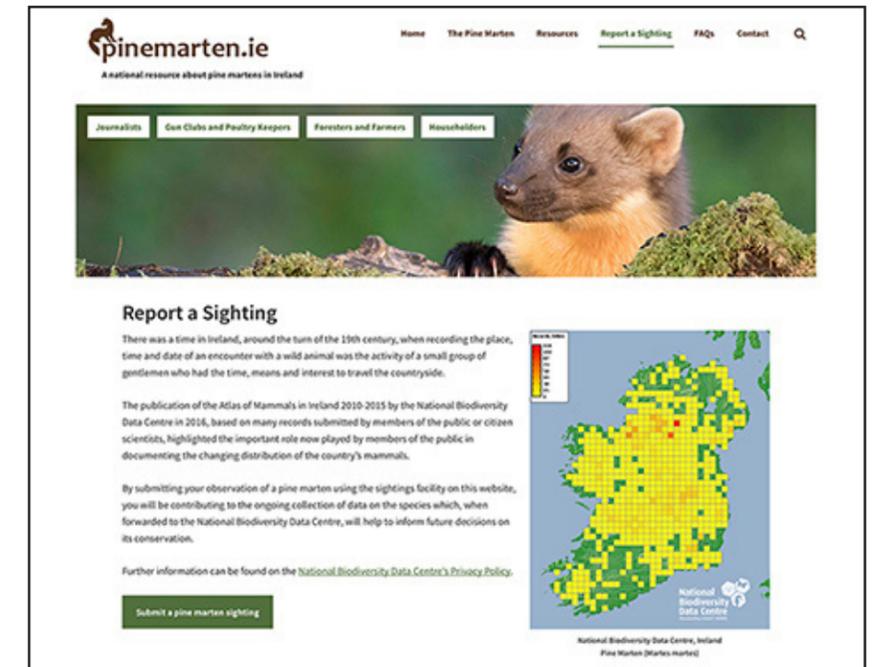
seeking information and advice, as interactions between the public and pine martens are becoming more common. This is inevitable as woodland, its favoured habitat, has also been in steep decline in Ireland, to the extent that it is now one of the least wooded countries in Europe. This has resulted in the pine marten making use of buildings as alternative den sites.

How do we as conservation biologists respond to this challenge? We hope, by providing accurate information through pinemarten.ie, which has been created with input from those at the forefront of pine marten conservation and conflict management, drawing upon their years of experience and expertise in responding to these interactions, that these interactions will be better managed in the future, to the benefit of both human and marten.

The website is tailored to meet the needs of four key groups: householders, journalists, gun clubs and poultry keepers, and foresters and farmers. It provides answers and tried and trusted solutions to the most commonly raised queries.

Marten-human interactions cover a wide range of situations, from martens denning in houses to those fond of robbing wheelie bins. Journalists face pressure to meet tight deadlines, so the website provides facts about pine martens, along with high-quality images and videos to encourage accurate reporting rather than 'fake news'.

The website is not just about problem solving, however. It also celebrates this fascinating mustelid and wildlife enthusiasts can learn about pine marten ecology and life cycles, the history of the species in Ireland, opportunities for ecotourism and its place in Irish culture and folklore. Researchers can access scientific papers and reports on topics such as pine marten population density, dietary analysis, and red and grey squirrel interaction. In addition, there is the facility to report a sighting of a pine marten, which links to Ireland's National Biodiversity Data Centre.



Visitors to pinemarten.ie can report sightings of pine martens in Ireland

Recently, WWF published its *Living Planet Report*, showing a 60 per cent extinction of vertebrates over the last 40 years. The recovery of the pine marten population in Ireland

during this time period is something worth celebrating, and how better to do so than by providing the animal with its own website.

Go Wild Nature Camps



The Go Wild Nature Camps returned during Heritage Week 2018 to connect children with their local environment. Their purpose is to increase awareness and appreciation of the natural world

in the younger generation through a variety of practical activities and hands-on learning, designed to reveal the wonders and importance of local biodiversity. Engaging people of all ages in nature is

Discovering life in the depths of ponds can inspire and excite young people about wildlife

crucial if we are to conserve animals and habitats at risk, and these camps aim to build on children's innate interest in wildlife before it is lost. The camps also link a range of research and conservation organisations with local community groups and families, to share an appreciation and knowledge of the local natural heritage.

The camps are run by BirdWatch Ireland with Galway County Council, Vincent Wildlife Trust and Galway-Mayo Institute of Technology, and are funded by Galway County Council and the Heritage Council. In 2017, the Heritage Council acknowledged the camps with the inaugural 'Cool for Kids' National Heritage Award.

Two firsts for pine martens in the North

Kevin O'Hara, Pine Marten Project Officer — *Back from the Brink*



It's been an exciting year for confirming the presence of pine martens in Northumberland and in Cumbria, as part of our *Back from the Brink* project.

Well, what a year it's been with our first confirmed Northumberland pine marten record and now our first confirmed Cumbrian record from the Kershope forest area. It has been non-stop, but we still have a long way to go before we can fully assess the status of the pine marten in the north of England. To date, we have had nearly 30 confirmed marten records. These records have come from images and videos from trail

cameras, including the bizarre video caught on security cameras in the city of Sunderland, which featured in the local news. We have also collected hair samples using hair tubes. We are thankful to the many volunteers who have contributed to these records, and who have helped us to achieve this milestone. It is an achievement we hope to progress in the future as we aim to get a better understanding of the martens in the region.

This winter, we are putting more bait and cameras out in targeted areas of the forests to try and ascertain what we have. We will be using various techniques to try and get good images of the martens' bibles, in order to identify individuals and to give us a rough idea of numbers. Using these techniques, we have been able to ascertain that we have at least five different individuals, a mix of both sexes, identified over the entire region. This probably doesn't sound many, but this time last year, we had identified no martens at all.

Although we are dealing with a very large area with lots of needles in lots of haystacks, we have been able to identify several clusters of records, making it easier to target these locations more intensely.



The first record of a pine marten caught on camera in Kershope Forest, Cumbria

In addition to our monitoring work, we have plans to widen our partnership working, particularly with the widely-established red squirrel monitoring groups, the local Wildlife Trusts and other conservation and mammal organisations, to try and strengthen the future for pine martens in the region. We also hope to continue to establish further volunteering opportunities for people to be involved, and to learn from the project, including developing roles with the universities of Newcastle and Cumbria.

All told, we are focusing on continuing to deliver the project's aims and looking to what can be delivered beyond the project's lifespan, in order to safeguard and enhance the re-establishment of pine martens in the north of England and beyond.

Many thanks to all involved.



Our first colour image of a pine marten in Northumberland

Mostelas progress the weasel conundrum

Lizzie Croose, Senior Science and Research Officer



Using a monitoring method developed in the Netherlands, we finally seem to be making progress with the weasel conundrum.

Despite being considered fairly widespread and common in Britain, weasels and stoats are among our hardest mammal species to study. Consequently, there is a lack of information on abundance and population trends, which means that both species are listed as data deficient in the recent review by The Mammal Society of the population and conservation status of British mammals. One of the issues has been a lack of a reliable method to collect data... no methods, no results!

Never one to turn down a challenge, Vincent Wildlife Trust has been trying to get to grips with how to monitor and collect data on weasels and stoats, with a little help from our friends at the Dutch Small Mustelid Foundation (DSMF). The DSMF has been using a detection device called a 'Mostela' to successfully detect weasels and stoats in the Netherlands. The Mostela comprises a wooden box with a plastic tunnel running through it, and a camera trap housed inside to record footage of any animals that enter.

On a trip to the Netherlands in June, we visited field sites where the DSMF had been deploying Mostelas and getting great results, particularly with weasels.



The inside of a Mostela

Over the past few months, we've conducted a pilot study using the Mostelas to trial their efficacy in detecting weasels and stoats. So far, we've trialled them at three sites where weasels and stoats were known to be present. After trawling through hours and hours (and hours) of footage of small mammals – including one occasion where a vole had gone into a Mostela and slept intermittently in front of the camera for several hours, resulting in 87 videos – I had to do a double-take when we finally got a video of a weasel.

I was so surprised, I actually shouted, "WEASEL!" excitedly, much to the alarm of Clyde, our 'office dog', who was probably disappointed at the lack of a real-life weasel in the office for him to play with. Encouragingly, weasels were detected in Mostelas at all three of the trial sites.

By contrast, stoats were only detected at one site, despite being present at all sites, suggesting that they are perhaps more reluctant than weasels to visit Mostelas. Along with weasels and stoats, the Mostelas have been visited by plenty of small mammals (mice, voles and shrews), a confused rabbit, grass snakes, an adder, and even an American mink.

Based on our pilot study and the success achieved in the Netherlands, the Mostela method shows promise for future surveys and research, particularly on weasels. There is more work to be done to optimise the use of this method and in gathering meaningful data from it, but it's encouraging to know that we're making some progress with the weasel conundrum.



Caught on camera: a weasel in a Mostela



Mink on the Brink

Steve Carter, Carnivore Programme Manager



A visit to LIFE Lutreola Spain has helped to understand the problems facing the European mink, and how our work can support the endeavour to save it from extinction.

In September of this year, along with fellow mustelid enthusiasts Lauren Harrington (WildCRU, University of Oxford) and her partner, Andrew ‘Harry’ Harrington, I was very fortunate to visit La Rioja region in the north of Spain. This was to see the massive effort underway by the LIFE Lutreola Spain project, to conserve the last remaining population of European mink in Western Europe. One of Europe’s most critically endangered mammals, the European mink is in

real danger of becoming the next mammalian extinction, with fewer than 5,000 individuals estimated to be left in the wild, occupying less than three per cent of their former range. Although similar in appearance to the introduced American mink, European mink are more closely related to our own polecat, with which they can hybridise where the range of the two species overlaps.

European mink have never managed to colonise the British Isles, but were once widespread throughout continental Europe. Their catastrophic decline is attributed to the combined effects



A young mink being released, wearing a soft radio collar

of loss and degradation of their habitat, over-exploitation for their fur and the deleterious effect of an increasing population of their distant relative, the non-native American mink. The latter both outcompetes and predated the smaller European mink.

This is the backdrop to the four-year LIFE Lutreola Spain project, co-ordinated by Tragsatec. Madis Podra and Asun Gómez are two of the technicians leading the conservation effort on the ground for this ambitious, multi-partnered project, which has three overarching objectives:

- 1 The eradication of American mink from within the range of European mink and targeted risk zones;
- 2 Increasing the viability of the wild population of European mink through releasing captive-born individuals;
- 3 Creating a new monitoring network to assess the status of both species after the project has ended.

Madis, Asun and colleagues have made enormous headway in the eradication of American mink across a wide geographical area,

and good progress has been made in the development and improvement of captive breeding facilities. The three of us had the good fortune to visit a couple of small breeding facilities and some pre-release pens where captive-born young mink (kits) are being prepared for life in the wild by ‘hunting’ fish and crayfish, and generally becoming habituated to the release area, from within the safety of a predator-proof pen. We were also able to participate in the radio tracking of some recently released European mink and to visit some new sites being considered for future releases.

We are indebted to Madis, Asun and their colleagues for extending generous hospitality, during what was clearly a busy time for them, and we wish them well in their endeavour to turn around the fortunes of this imperilled mammal. This trip was essentially about evidence gathering and information exchange, and it was very successful on that front, fostering fruitful and urgent discussion on how we and others in the UK may be able to help in the battle to tip the balance in the favour of European mink. So... watch this space.



Pre-release pens allow mink kits to prepare for life in the wild in safety (top) while radio tracking allows the monitoring of recently released European mink

A year of volunteering triumphs

Gemma Fisher, Volunteering and Community Engagement Officer



So, we seem to have found ourselves at that time of year again; the nights are drawing in and it becomes a race against time to fit all plans into the daily ration of daylight hours. The trusty thermals that have been tucked away and forgotten about for most of the year begin to make a regular reappearance into the morning routine and, in amongst it all, thoughts increasingly turn to the fast-approaching New Year.

Whilst welcoming in the year to come often involves looking forward and taking positive strides to carry any of the positive momentum that you

hold, it also provides the perfect opportunity to take a moment to reflect on the highlights, the adventures and the successes that have been part of 2018’s journey. As I take a look back on my 2018 journey with Vincent Wildlife Trust, it becomes clear that much of the positive momentum I intend to carry through to next year has been generated by and built upon the input and efforts of the Trust’s diverse network of volunteers.

We now have a newly-constructed pine marten viewing hide and a Pine Marten Interpretation Den in Wales; an ever increasing database of marten records and camera footage from Northumberland, Wales, and now Cumbria, which all contribute to the ongoing scientific and conservation research of the Trust; we have a greater understanding of observation methods for monitoring stoats and weasels; we have a greater number of newly constructed pine marten den boxes throughout Wales and England; and we have up-to-date and in-depth records of bat roosts from numerous sites across England, Ireland and Wales.

But that’s not all. Many volunteers have also taken time this year to offer feedback and insights from their VWT volunteering experiences, all of which have informed the development of an updated volunteer programme. Some volunteers have also contributed stories and material to be included in VWT’s first volunteer newsletter.

It truly has been an impactful, impressive and heart-warming year for VWT volunteer contribution, and my hope is that the year to come, will again allow such enthused, selfless and valued conservation contributions to go from strength to strength.



VWT’s Kevin O’Hara fitting a pine marten den box, with the help of a volunteer in Northumberland



Linda Priestley

8th International Colloquium on Squirrels

Kate McAney, Head of Conservation Development — Ireland



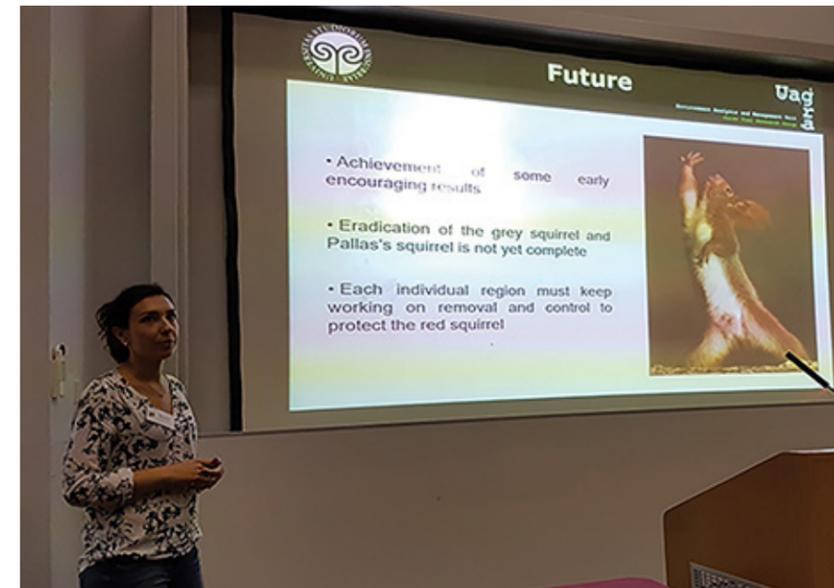
Excited to have the 8th International Colloquium on Squirrels on my doorstep, I joined the gathering of squirrel researchers from around the world at the beginning of June 2018 and discovered many similarities and a few differences.

OK, I admit I exaggerate just a little. I live 22km north of Galway city and the venue for the colloquium was in fact the Arts Millennium Building of National University of Ireland Galway (NUIG), which is within walking distance of Galway city centre. But, when you look at the locations for the previous meetings, USA (Pennsylvania 1994; Oregon 2000), England (2003), India (2006), Canada (2009), Japan (2012) and Finland (2015), you may understand why I felt this colloquium was a local event.

I am going to resist defining the term 'colloquium', because you can easily find many definitions of the term on the web (clue - essentially the same as a conference), so I will instead set the scene by quoting Dr Colin Lawton's introduction from the book of abstracts.

'The International Colloquium on Squirrels is a global event that is held every three years. It brings together squirrel researchers to discuss all aspects of squirrel biology including ecology, behaviour, evolution, morphology, genetics and conservation.'

Originally focussed on tree squirrels, the colloquium was expanded to include flying squirrels at the 4th meeting in Kerala, India, and in Galway the programme was further expanded to include the ground squirrels, so completing the whole Sciuridae family. In Ireland we have only two representatives of this family, the red squirrel and the North American grey squirrel, so it was a treat to learn about animals that went by the names of the big cypress fox squirrel, red-cheeked ground squirrel, Japanese giant flying squirrel and even yellow pine chipmunks.



There are many similarities between research topics on squirrels and other mammals

I have been lucky during the course of my work to be able to attend many international meetings on bats and mustelids, but this was my first time to attend one solely devoted to another mammal family. It didn't surprise me, however, while sitting at the presentations to discover that squirrel folk are as devoted to their research subject as those of us working on bats or pine martens. Other similarities were the research topics, with papers on various aspects of ecology, management, behaviour, conservation, taxonomy, genetics and morphology.

One difference though, that came to mind, was the topic of management. At bat conferences, this usually refers to implementing mitigation measures to counter negative changes to the roosts or foraging grounds of bats due to road or housing developments. But this topic can mean something quite different for members of the squirrel family. Several papers addressed research into ways to manage those species considered pests of food crops, for example, zinc phosphide-coated cabbage is being investigated as a way to control Belding's ground squirrel in parts of northeast California and



The basement of Moore Hall House is an important hibernation site for lesser horseshoe bats

southeastern Oregon, where it is a significant pest of alfalfa.

I was able to repay the delegates for sharing their knowledge, by providing them with a guided walk mid-way through the colloquium. We visited a wood on the shores of Lough Carra, which is 60km north of Galway City. This wood contains the ruins of Moore Hall House, the basement of which is an important hibernation site for hundreds of lesser horseshoe bats. The bats also use it all year round and you can find low numbers of this species at any time of the year, along with barn owl chicks in the summer. The ruin also provided a suitable backdrop for the obligatory conference photograph.

Located elsewhere within the wood, is a two-storey building, which was formerly a granary and which has been renovated by the National Parks and Wildlife Service (NPWS) as a maternity roost for the horseshoe bats. As we walked in front of both buildings, I asked all the delegates to speak quietly to prevent disturbing the wildlife within.

I've been involved with conserving and monitoring the bat colonies at these two sites, in partnership with the NPWS, since the mid-1990s, but never suspected that one day I would be instructing a group of squirrel experts to tip-toe past.



A first for the bats of Eastern Europe

Henry Schofield, Head of Conservation



In late October, I was lucky enough to attend the First International Conference on Bats in Eastern Europe, held in Armenia.

The meeting was organised by Astghik Ghazaryan from the Yerevan State University and Tigran Hayrapetyan from the Armenian Association of Mammologists, both of whom I know through the Eurobats Advisory Committee. The conference was sponsored by Eurobats.

I have visited the Caucasus on a number of occasions, but had never been to Armenia. For a bat scientist, this region is really interesting as it is at the crossroads

of Europe, Asia and the Middle East, with a resulting mix in the bat fauna. Bat conservation and research is at an early stage in this part of eastern Europe, with new species regularly being added to country lists and some huge challenges for the relatively small group of very dedicated local bat conservationists.

I travelled to Yerevan from Tbilisi with my Georgian friend Ioseb Natradze on a six-hour drive between the neighbouring capitals, which provided the chance to take in the beautiful landscape and to discuss bat conservation in the Caucasus. It's a very rugged, mountainous region with numerous inaccessible cave systems, which are the prime summer and winter roosting habitat for bats in the area. Ioseb described the difficulties of climbing for hours through deep snow in winter to get into hibernation sites and his encounters with bears whilst doing bat surveys in the summer.

Around 40 bat biologists gathered for the three-day meeting, with attendees from Russia, the Baltic States, Belarus, Ukraine, Czech and Slovak Republics, Bulgaria and the Caucasus. Fortunately, English was the conference language but

when some of the speakers switched to Russian, Ioseb whispered an accompanying translation in my ear.

The talks ranged from faunistic surveys to disease monitoring. We learned about the problems of radio-active pollutants affecting bats in the southern Urals, the latest GPS data from greater noctule bats in Slovakia, and the bat distribution data in Ukraine. I discovered that Belarus has only got one cave and that our knowledge of bat diet is being significantly changed by the use of DNA metabarcoding of droppings. I gave two talks: one on the work of our post-doctoral researcher, Patrick Wright, using molecular techniques to age Bechstein's bats, and the second on the radio-tracking of Mediterranean long-eared bat that we conducted in Croatia.

Following the conference, we had a day field excursion visiting historical cultural sites around Yerevan. For me the highlight was a medieval caravanserai, a building provided for merchants and their animals on one of the high mountain passes along the Silk Road. Our Armenian hosts had discovered it was a roost for Alpine long-eared bats.

Apart from the stunning landscapes my overwhelming impression of Armenia was the hospitality of the people. Trying to find space in my luggage for the Pomegranate wine our hosts had delivered to my hotel the night before we left was a struggle, and the video I received from the students at Yerevan University a week after my return, encouraging me to come back to Armenia soon, was very touching.

I will definitely be back.



A medieval caravanserai, now appropriated as a roost by Alpine long-eared bats

Updates on VWT's bat research projects

Domhnall Finch and Patrick Wright

Bats and landscape permeability

Domhnall Finch, PhD student
VWT/University of Sussex



Half way into the third year of my PhD, I continue to investigate the impacts of human modified landscapes on functional connectivity and movement of bat species. This year, with the help of Devon Wildlife Trust, landowners, and local volunteers, we continued our experiment looking at 'pinch points' in the landscape, and examining whether distance to roads influences bat activity. This data will be analysed over the coming months with some interesting results to come next year (we hope). Now that the seasons have changed and we are moving into winter, my research

also shifts focus to hibernating greater horseshoe bats. Once again, we are preparing to go underground to monitor their populations. We aim to identify how these bats move between hibernation sites and to observe the social interactions that may occur between different sexes and age classes.

Monitoring populations of Bechstein's bat

Patrick Wright, Post-doctoral researcher
VWT/University of Sussex



Since completing my PhD at the start of 2018, I've been fortunate to be able to continue my research on Bechstein's bats as a post-doctoral researcher at the University of Sussex. My current project is focused on testing different methods to monitor populations over time. For this project, I am combining the different molecular techniques I developed during my PhD and simulating population changes over a long period of time. This will determine whether we can detect population trends, with the hope that we can implement this on Bechstein's bats and other woodland species in the future.

Ringling rare tree bats to age a colony

Anita Glover, Bat Programme Manager



A long-term ringing project on barbastelles looks ahead to innovative ageing techniques developed through VWT-funded research.

Nestled in a densely wooded pocket of the Malvern Hills, is a Vincent Wildlife Trust bat box scheme that is home to a very special species – the rare barbastelle. Barbastelles are specialists, feeding mainly on moths and roosting in tree crevices and beneath flaking bark. In Britain, they are classed as vulnerable – not only because there is evidence of a decline in moth abundance and in the quality of ancient woodland habitat – but also because we know so little about them. We don't know how big the population is, or whether it is increasing or decreasing. Its distribution covers southwest England, with records becoming more patchy in east England, the Midlands and Wales. We don't know, however, whether its range is expanding or contracting. The barbastelle is not unique in these respects.

In 2018, The Mammal Society's review of the population and conservation status of Britain's mammals highlighted the evidence gaps when it comes to our 'tree bats'. Without methods to assess and monitor populations at a local and

national level, how can we ever know if anthropogenic changes to their environment are having a detrimental impact, or whether our conservation efforts are actually effective?

In the past few years, VWT, in collaboration with researchers at the Universities of Exeter and Sussex, has begun developing innovative molecular techniques to study populations of another rare woodland specialist, the Bechstein's bat. Thanks to a long-term ringing project on a Bechstein's colony in Dorset, tissue samples from bats of known age could be taken and used to establish a relationship between the age of a bat and the extent of methylation of its DNA. The process of obtaining tissue samples, whilst requiring a special licence, is harmless to the bats. A small biopsy (circular disc) is taken from the wing, which quickly closes and has no impact on the bat's flight. (Bat wing membrane is the fastest healing mammalian tissue).

So why is knowing the age of a bat important? Well, if we can establish the age of all the bats in a colony, or at least a representative sample,

then we know the age structure of that colony, which tells us a lot about its status. Populations with a large proportion of young individuals are likely to be healthy and increasing. Conversely, an ageing demographic is an indication of a population in decline. Whilst the ageing technique has been developed in Bechstein's bat, it could be applied to other species, including barbastelle; but we need to collect DNA samples from bats of known age, which is where the colony in the Malvern Hills comes in.

The Malvern Hills bat box scheme was established in 2004, but it was not until 2006 that barbastelles first appeared in the boxes. Although the boxes were monitored each year, the bats were not ringed. Bat rings are applied to the forearm. They do not close completely but are an omega shape with a gap where the wing membrane joins the forearm. However expertly applied, there is still a risk that the ring could cause injury, albeit a very small chance, so ringing is only undertaken where there is a clear scientific reason or conservation need to do so.



Henry Schofield

Little is known about our rarer tree bats, such as barbastelles

So, in 2018, in light of the success in ageing Bechstein's bats, VWT embarked on a long-term ringing project on the barbastelle colony in the Malvern Hills in order to be able to age them. This was easier said than done, with a challenging steep terrain and the flighty behaviour of barbastelles, but I'm happy to say that I have an excellent team of volunteers to help.

Those who have had the fortune to find barbastelles breeding in their bat boxes will surely attest to their flighty behaviour. Unless the weather is cold, and the bats are torpid, they are active and alert, and seem to have a sixth sense for the approach of a bat worker with a ladder. Early on, having experienced an entire colony pile out of a Schwegler 1FF box before the volunteer's foot hit the bottom rung of the ladder, we knew a stealthier technique was required. We now sneak up to each box, armed with hand nets on long poles – static nets that are usually used to catch bats emerging from a roost hole at dusk. Active bats will quickly emerge and drop into the net placed below the box. Only if nothing happens, do we dare shine a torch inside the box to check it's empty. Once in the net, the bats immediately start to climb towards the rim, aiming for freedom. The net must be swiftly lowered and emptied, whilst a spare net is moved into position to catch the next batch.

In hindsight, I admire the barbastelles' gumption and their efforts to outwit us, but initially their evasiveness was frustrating; without bats in the hand there is no project. It has been the perseverance, ingenuity and careful approach of the volunteer team that has meant we can effectively capture the bats without compromising their welfare.

Once in the hand, barbastelles are a beauty to behold. Dark, almost black, fur with silver tips gives them a frosted appearance. Their faces



Frank Greenaway

VWT's long-term ringing project aims to provide information about the age structure of a colony of barbastelles

are unlike any of the other British species, with ears that are almost square in shape, and meet above their nose and extend down their face, so as to encompass their tiny, bead-like eyes.

Although we check the boxes monthly between spring and autumn, the critical period is when the young of the year are flying and are grown enough to ring, but still distinguishable from the adults (typically late July/early August). Only by ringing the bats at this stage can we know their exact age when taking tissue samples in the future.

If you would like to volunteer with VWT on this project in the Malvern Hills, please contact our Volunteer and Community Engagement Officer, Gemma Fisher, and register your interest at gemmafisher@vwt.org.uk

In other news, VWT's work on barbastelles will be taking a major step forward with the commencement of a Vincent Weir Bursary-funded PhD in 2019. Keep an eye on VWT's website and social media pages in the coming months for more information.

Contact us

3&4 Bronsil Courtyard, Eastnor, Ledbury, Herefordshire HR8 1EP
01531 636441 | enquiries@vwt.org.uk
www.vwt.org.uk

Follow us



© Vincent Wildlife Trust 2018
Charitable Company Limited by Guarantee Registered in England No. 05598716, Registered Charity No. 1112100 (England and Wales),
SCO43066 (Scotland), 20100841 (Republic of Ireland).

Cover photograph: Pine marten ©Robert Cruickshanks

