

WILDLIFE

World

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Number 1

people's trust for endangered species |

Seeing red

Forging a future for our
native squirrel

UK

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Harvest mice in Surrey
Moth project updates
Hedgehog Street

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around the world

NATURE KNOW-HOW

Wildlife watching tips
from the experts in our
DIY feature



Hello, and welcome to issue one of *Wildlife World*, the new magazine for all supporters of People's Trust for Endangered Species (PTES). Many of you will be old friends of our *Mammals UK* magazine or *PTES News*, and we hope you'll find *Wildlife World* an exciting and worthy successor to both. It's a positive development for us, bringing all PTES' diverse projects under one umbrella publication, and we're planning to deliver a whole world of research and conservation news to your letter-box twice a year.

Those of you who join us from *Mammals UK* may recognise me as editor of *MUK* for nine years – time that has flown! Like you, I'm a big fan of British wildlife, and you'll

be pleased to know that despite our global remit we won't be skimping on home species – PTES is still funding as much UK conservation as always, and all the updates will be published here. I'm delighted to be bringing this exciting magazine to a much bigger readership, and I hope you'll tell us what you think of it.

All best

Dr Amy-Jane Beer



A fresh start for PTES this spring.





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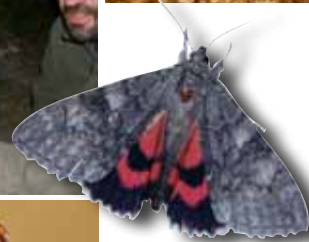
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Make this magazine work harder...

When you've finished with this copy of *Wildlife World*, please pass it on to someone else or donate it to a waiting room collection – you might find us a new supporter!

If you've picked up this magazine and enjoyed reading about the projects PTES funds, you can support us for just £3 a month and receive two issues of *Wildlife World* every year. Please contact us at the address below for details.

people's trust for
endangered species



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It's dormouse season!



Susannah Penn, David Orme



Are dormice the cutest rodents? Once seen, a dormouse is difficult to mistake for a mouse or a rat, those more numerous members of the Order Rodentia, with whom dormice occasionally get confused. Mice can become severe pests, but dormice rarely do harm; mice are generalists whilst dormice are specialists, and mice are numerous, whereas dormice are scarce. Their preferred haunts tend to be places people don't like to go, for example amongst dense shrubs in old woodland or in thick bramble and scrub. Few people ever get to see dormice going about their nightly life in the trees but they can be found during the day in nest boxes put up for them to shelter in. We use nest boxes to monitor dormouse populations so we can track how they fare over time. It can take a lot of boxes to find even a single dormouse and because they are rare, a special licence is needed to handle them or disturb their distinctive woven nests. But to meet a dormouse, and see its great black eyes, long whiskers and coat the colour of golden sand, is to be captivated. This rare and vulnerable animal needs all the help we can give.

IAN WHITE
PTES Dormouse Officer

Dormice in Kent

21st July, 25th August, 22nd September, 20th October

Hunstead Wood near Chatham Hatch has good numbers of dormice so there is a high possibility of finding at least one! We meet at 9.30am to begin the dormouse box check, which will take between two and three hours. £10 / £14

Dormice in Herefordshire

20th September

Spanning 506 hectares, Dymock Woods is home to pearl bordered fritillary butterflies, pied flycatchers, nuthatches and hazel dormice. This event starts at 10am and will last about two hours. £10 / £14

Dormice in Suffolk

14th October

PTES helped to reintroduce 35 dormice near Needham Market back in 2000. Happily the population is flourishing and on this event we will help check the 200 nest boxes specially erected to monitor the restored population. The box check begins at 8.30am and will finish at about 1pm. £10 / £14

Dormice in Briddlesford

20th October

Join us at our own reserve on the Isle of Wight to help check some of the 500 nest boxes with Ian White, our Dormouse Officer. Ian will also talk to you about dormouse ecology and the management being carried out in our woodland to benefit all sorts of species. We'll meet at 10am and finish in time for tea and cake at 1pm. £12 / £16

Dormouse Explorers!

20th October

A special event for young dormouse lovers. Search for the secretive dormouse and help make a dormouse house at our woodland reserve on the Isle of Wight. We will begin at 2pm and finish with a slice of cake at around 4pm. £8 / £12

The lower prices shown are for supporters of PTES. For further details and booking, please call Zoe on 020 7498 4533, visit www.ptes.org/ events or scan this code to go direct to our Wildlife Encounters web page.



Join in our 'citizen science' volunteer initiatives!

Living with mammals...



HEDGEHOG STREET
CITY OF WILDLIFE

MAMMALS ON ROADS...



To join in, please visit www.ptes.org or scan this code to go direct to our surveys page.



Frontline

PTES HELPS FUND THE BEST OF BRITISH CONSERVATION, BUT IT DOESN'T STOP THERE.
YOUR SUPPORT ALLOWS US TO REACH BEYOND BORDERS TO CONSERVE SPECIES ALL
OVER OUR GLOBAL BACKYARD.

THERE'S A PATRIOTIC BUZZ in the air of late, but it's not necessarily the chest-swelling 'Rule Britannia' kind, or even the agonising 'England robbed in penalty shootout' type. It seems a blend of austerity economics and a fashion for homespun, wholesome, stitch-in-time self-sufficiency has reminded a jaded nation that, actually, making the best of things is something that Brits are rather good at. Add the trifold influences of a royal wedding, a diamond jubilee and the London Olympics, and it's become almost impossible to avoid union flags, bunting, bake-offs and chirpy, lip-stiffening slogans of the 'keep calm and carry on' variety. It may all be a bit naff and sentimental, but I understand the desire to retreat from the Britain of Jeremy Clarkson and Katie Price to that of Swallows and Amazons (without the gender stereotyping of course) or Miss Marple (without the murders, naturally).

It's nice to revel in our achievements a little, and refreshing to rediscover a passion for our heritage, both natural and man-made. Focusing on the home front also suits those of us counting pennies or carbon kilos and deciding that exotic travel plans must be shelved for a while. But appreciating our own patch, and investing in it, should never mean we turn a blind eye to the rest of the world. The fact that doing so is increasingly difficult should tell us something.

Some of you joining us from *Mammals UK* may lament the passing of the 'exclusively' UK bit. But rest assured, PTES' commitment to home projects is as great as ever. Since 2001, the restricted fund for UK mammal conservation (launched as Mammals Trust UK) has dished out over £1 million and with your support there will be much more of the same. But there's a whole lot more to PTES. Since 1977 the Trust has funded several hundred conservation research and species monitoring projects around the world.

I remember when Britain joined the EU and we began to be issued with little claret-coloured passports. Suddenly there was a market for passport wallets that could disguise that offensively foreign-looking document inside a nice respectable facsimile of the old black British one. Nostalgia and national pride are comforting, but they shouldn't blinker us. When it comes to conservation, defining 'home' is nowhere near as simple as ordering a new cover for your passport. We are all citizens of a global community, and the problems we face are a collective responsibility.

It's true that there are a great many big issues to worry about. Where to begin? How can we as individuals possibly have any influence over events thousands of miles away? Even if we can be bothered to consider species we're never likely to see wild for ourselves, it's impossible to do anything practical to help them all, surely? Actually it is *perfectly* possible. It just takes a means of sharing ideas, goodwill and information. And global communication networks mean we now have that means. The earth is our patch, and the wildlife living all over it is our responsibility. By uniting our voices we can exert an effect. Check out the kids enjoying Saiga Day in western Kazakhstan on page 8, thanks to PTES. Or the community leaders of Muanenguba in Cameroon gathering to discuss ways of conserving the African cherry tree on page 16, again, made possible by PTES and its largely British supporters. Your donations

and support allow researchers and conservationists all over the world to shoulder a shared responsibility, on our behalf.

This global reach can't happen without technology. You'll notice we've started using little square QR codes in the magazine. If you've not encountered them before, they're shortcuts that allow smartphones to connect instantly to a relevant website with no need for you to memorise a web addresses or type anything in, though we'll still list web addresses too. We're also embracing social media, encouraging a flow of ideas on Facebook and Twitter, and of course there's the website.

This won't be everyone's cup of tea. New technology is bewildering. At 41, I'm not quite a 'digital native' and I regularly feel I'm scrabbling to keep up. But it's an exciting time to be alive and opting out is no way to treat the opportunity of a millennium. Not since the invention of the printing press has technology promised change like this. What people think and say now counts like never before – the Arab Spring was just the start. Even so, for some there will never be a satisfactory alternative

to the paper magazine in your hands.

But printed media have a cost, both financial and environmental, and for these reasons you'll be receiving two copies of *Wildlife World* a year instead of four *Mammals UK*s or two copies of *PTES News*.

It's as important as ever to focus on our home front. But I hope that investing care in 'my' local badgers, for example, will never mean I can't support Jimena Guerro-Flores's work on neotropical otters in Mexico (page 9) or share the thrill of Andriy-Taras Bashta's discovery of a vast winter roost of barbastelles in the Ukraine (p19). I can't do it all myself, but by supporting an organisation like PTES the best way I know how, my personal reach is amplified and effectively unlimited.

According to the UK land registry, my backyard incorporates a courtyard, a veggie patch, a wood pile, a few nice flower beds and a bothersome bank of unkempt terracing I'll get around to landscaping one day. But in my mind, my 'patch' also extends over the road to the badger sett in the woods. And from there up the lane and out across the Yorkshire Wolds, Moors and Dales, north to Scotland and south to my childhood stomping grounds of Salisbury Plain and Devon. Who doesn't feel fondness and affiliation for places they've lived or visited and enjoyed, if only for a while? The territory of my affections has tendrils that extend across Europe to my birthplace in Germany and over the seas to the other continents I've visited. Now, thanks to the intricately spun silks of the world wide web and the real-time magic of social media I can honestly say I can't see the line between what's mine to care about and what's not. We're on this little blue spaceship together, and our fate depends on how well we pilot it. All its species are our shipmates and, with PTES, we can help take care of them.

So please, come with us, and even if you find the wide horizon a little daunting, keep calm and carry on.

'Appreciating our own patch, and investing in it, should never mean that we turn a blind eye to the rest of the world.'

Dr Amy-Jane Beer is a biologist, a freelance writer and editor and a lifelong lover of wild places and wild things. www.wildstory.co.uk



Putting Bechstein's on the map

A novel study into one of Britain's rarest mammals, Bechstein's bat, has revealed new sites for this elusive species and mapped its national range, from Wales to the Isle of Wight, for the first time. The four-year study, led by the Bat Conservation Trust (BCT) and funded by PTES, employed volunteers to conduct woodland surveys across England and Wales.

The *Bechstein's Bat Survey (BBS)*, published in March by BCT, reveals the species to be present in several counties where it had never previously been recorded – Buckinghamshire, Dorset, Gloucestershire, Kent, Somerset, Surrey and Worcestershire. The work also shows the species much further north in the UK than previously thought, with breeding females recorded in north Buckinghamshire and Worcestershire. The main breeding hotspots for the species are in Dorset, Somerset, southwest Hampshire, Isle of Wight and Sussex.

The survey confirms previous findings that Bechstein's bat populations

Right: Bechstein's bat, the subject of a newly published survey. Below left: Grafton Wood is thought to be on the northern limit of the species' breeding range in Britain.

tend to be restricted to ancient woodland. BCT is ready to issue advice on how this increasingly rare habitat can best be managed for rare bat species.

The methodology behind the *BBS* is as important as the results. While most UK bat species can be identified by listening to their high-pitched calls through a bat detector, Bechstein's calls are simply too quiet. So a new monitoring technique was developed. Woodlands were selected using a habitat model and surveyed using technology that mimicked the bats' social calls. Passing bats were attracted towards a trap where they could be safely caught, identified and released. This labour-intensive work was carried out by trained volunteers from ten local bat groups. In all, 199 target woodlands were surveyed, and 838 bats of 12 species were caught, identified and released. The totals included 57 Bechstein's bats (29 female and 28 males) at 37 sites.

Taking it further

BCT's Helen Miller, who led the survey, said 'This work gives us an understanding of where Bechstein's bats are in the UK. By protecting woodlands in these areas we can ensure the long-term survival of the species. We have also



identified small populations on the northern edge of the range which are likely to be vulnerable to environmental change and management practices.' One such edge population is at Grafton Wood in Worcestershire, and PTES has just agreed to fund a further study by Dr Johnny Birks and Eric Palmer, who will be radio tracking Bechstein's bats in what is one of the most northerly breeding populations identified in the *BBS*. They are hoping to discover where the bats are foraging and roosting, information that will be invaluable to the



Worcestershire Wildlife Trust

Frank Greenaway

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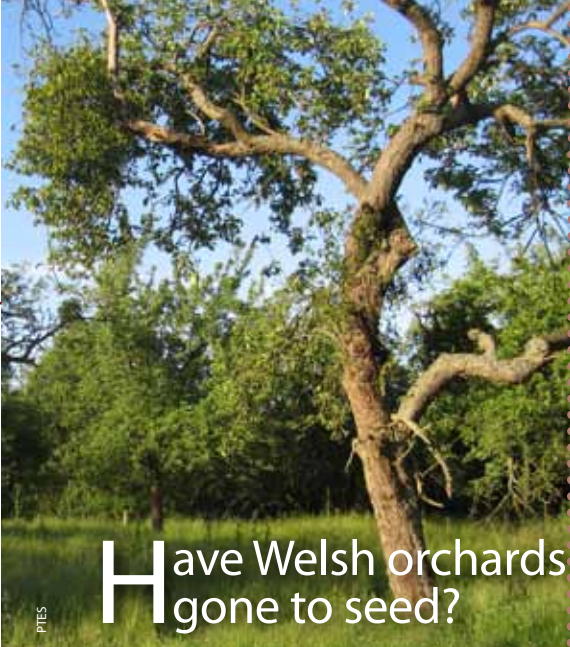
JOIN THE MINK PATROL

The Scottish Mink Initiative, a partnership that aims to free 20 000km² of Scotland of introduced American mink is appealing for more volunteers. The project, which secured funding totalling over £900 000 from sources including PTES, follows on from work led by Prof. Xavier Lambin in the Cairngorms National Park, which succeeded in rendering an area half the size of Wales effectively mink-free. 'We're really pleased with the enthusiasm and commitment of our volunteers,' commented mink control officer Ann-Marie MacMaster, 'But new volunteers are always welcome, so we'd like to hear from anyone in the area who might be interested in giving us some help.' More details are available at

BADGERS

The Welsh government has cancelled plans to cull badgers in Pembrokeshire as part of measures to control the spread of bovine TB. The decision to cull, made by the previous administration in 2011, was reversed in the face of concerns that culling was unlikely to substantially reduce TB in cattle and may contravene European law. Badgers in the proposed cull area will now be subject to a five-year vaccination programme. Planned pilot culls in Somerset and Gloucestershire are set for a judicial review in June, thanks to a challenge by the Badger Trust. The Wildlife Trusts of Cheshire and Shropshire are set to follow Gloucestershire WT in vaccinating badgers on their reserves. GWT claims that





PTES

Have Welsh orchards gone to seed?

ORCHARDS

PTES IS RECRUITING volunteers to take part in the first survey of remaining traditional orchards in Wales.

Our orchard team is combing aerial photographs of three and a half million hectares of Welsh landscape. So far we've located 2500 potential traditional orchard sites. We now need volunteers to verify our findings on the ground by checking for traditional orchard characteristics and recording the species, age and condition of the trees. Can you help?

At least 1800 different species are associated with traditional orchards, including many which are rare or scarce, such as the noble chafer beetle and mistletoe marble moth. Sadly, these refuges are increasingly threatened due to the intensification of agriculture, land development, and economic competition within a global market and our increased reliance on imported fruits.

Traditional orchards tend to have a low density of trees set in grassland. They are cultivated with low-intensity methods – no pesticides, no herbicides – and often grazed. Modern intensive orchards can be recognised in aerial photographs by planting patterns – the trees tend to be in narrow rows with visible lines of herbicide use. However, it takes local knowledge and people-power to confirm the picture.

In 2011, we completed a five-year project which revealed that 45% of England's traditional orchards are in poor condition. Additional funding from the Countryside Council for Wales and the Esmée Fairbairn Foundation is enabling us to undertake a similar exercise in Wales, which



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PINE MARTENS

Mixed fortunes for martens

The pine marten is the second rarest mammal in the UK, but one that has every chance of a good recovery, given proper protection.

In England and Wales, the news has been encouraging. With support from PTES, Vincent Wildlife Trust (VWT) has recently been able to confirm that pine martens are present in Cumbria, Northumberland and Yorkshire, and that the species' Welsh range is gradually expanding. VWT has also recently published a national conservation strategy for pine martens, aiming for the full restoration of the species to England and Wales. VWT staff are keen to hear from anyone willing and able to help with implementation of the new recommendations (enquiries@vwt.org.uk).

Meanwhile, in Northern Ireland, Dr Declan O'Mahony has been busy using PTES funding to survey the pine marten habitat of the Mourne Mountains and has reported some encouraging findings there too. 'We have deployed 126 hair tubes throughout forests in the Mournes. After the first survey session we had up to 33 hair samples to begin analysing. We also had some more good news about funding, with the Northern Ireland Environment Agency offering up to £5000 to the project.'

Sadly however, it's not all good news for pine martens in Britain. In Scotland, which has come to be regarded as the national stronghold for the species, concern is rising that martens may soon be threatened once again by an old enemy. Overzealous predator control was a principal factor in the decline of a number of predatory birds and mammals in the past, including not only martens but also polecats, wildcats, eagles and kites. Matters improved during the late 20th century, but the Scottish Gamekeepers Association (SGA) has drawn a link between pine martens and the recent failure to thrive of another threatened species, the capercaillie. An SGA spokesman said 'Predation levels across the board have risen and are now far too high for capercaillie numbers to get above the levels required to be safe. There is little point in wasting public money in creating new



Gotcha! A pine marten snapped by a camera trap in the Mourne Mountains of Northern Ireland.

habitat (for capercaillie) if you don't control the predators that are eating them.'

Despite invoking bird conservation, the SGA position is described as 'lamentable' by the RSPB. Scottish National Heritage takes a cautious line, pointing out that predation is just one of several likely factors in capercaillie decline, and advocating objective research to clarify the issue.

PTES CEO Jill Nelson said 'Effective conservation strategies are evidence-based and there is currently a lack of evidence that predation by pine martens is the main cause of capercaillie decline. It would be premature to introduce control measures.'

Declan O'Mahony

Species notes

Common name: Pine marten
Scientific name: *Martes martes*
Size: 55-80cm long nose to tail.
Habitat: Rocky & wooded landscapes
Lifestyle: Secretive, largely nocturnal, swift and agile climber, hunts smaller mammals and birds



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AlasdairSargent

TIGERS

TIGER NATIONS GET TOUGH ON ILLEGAL TRADERS

A gathering of police chiefs and customs officials from the 13 tiger nations and partner organisations such as Cites has taken place in Bangkok. All have agreed to work together to combat the illegal trade in these big cats. The meeting follows a tiger summit held in St Petersburg in November 2010, at which the tiger nations pledged collectively to double the global population of tigers by 2022 by addressing the chief problem of poaching and illegal trade.

The last century saw wild tiger numbers fall from about 100 000 to about 4 000. Of six remaining subspecies, none numbers more than 1 000 wild individuals, and all are threatened by the trade in body parts. In the last 10 years, there has been a 40% decline in tiger numbers, with conservationists warning that some populations may disappear within 20 years.

The meeting also supported a new Interpol-led initiative called *Project Predator*, which launched in November last year. Its aims are to organise

high-level international collaboration to improve political will to tackle the problem of illegal trade in tiger products and body parts, to transform politicians' will to act into tangible support from government departments and agencies, and to train enforcement officers in necessary skills. The tiger nations are also being encouraged to establish National Tiger Crime Task Forces to work with Interpol to provide 'modern, intelligence-led enforcement practices for tiger conservation'.

Interpol said that the project would not be limited to the protection of tigers, but would extend to other big cat species facing similar threats in Asia. John Scanlon of Cites stressed the importance of prosecutions as well as seizures, and Interpol chief Jean-Michel Louboutin said the seminar 'highlighted the challenge and the need for enhanced international co-operation. Criminals cannot prosper from abusing our shared natural heritage.'

Rhino update

Poaching has been one of the main threats facing all five species of rhinoceros. The animals are hunted for horn to be used in Traditional Chinese Medicine (TCM) and in the manufacture of ornamental dagger handles. Incidents of poaching had dropped substantially since the 1970s and 1980s, with the numbers of animals being lost in Africa since 2000 averaging about 15 a year. But since 2008, poaching for TCM has escalated again. 448 black and white rhinos were killed in 2011 in Africa, and 135 were taken in South Africa in the first three months of this year. Prosecutions have jumped as

well – South African authorities have arrested 89 people since January in connection with rhino poaching. A game reserve manager implicated in poaching operations shot himself dead when confronted by police. This is organised crime, with a human cost as well as a wildlife impact.

The April edition of *BBC Wildlife* magazine carried an interview with game reserve owner Damien Vergnaud. At Vergnaud's instigation, the white rhinos on his land have had their horn injected with a cocktail of chemicals that dye the horn and render it toxic, x-ray visible and worthless to poachers. The effect is permanent, unlike dehorning, which has to be repeated every few years. So far the deterrent

seems to have been effective, though the treatment is too expensive to be used in large reserves where rhinos are harder to track down.

The poaching problem is most acute in Africa, but it is by no means restricted to the continent. Our colleague in India, Pranjal Bezbarua, told us that 12 poaching incidents were reported there last year. Pranjal and his team are attempting to establish a viable population of one-horned rhinos in the Manas Tiger reserve, where one animal was poached in 2011. In March, two rescued male rhinos were brought in from Kaziranga National Park while four wild individuals (two males and two females)

were released shortly afterwards. The rhino population in Manas now stands at 22, and Pranjal and his colleagues are hoping for a healthy increase in numbers over the coming years.



Pranjal Bezbarua

Tide turns against poachers

SAIGA

The cause of death of nearly 12000 critically endangered saiga antelope that died in one week in western Kazakhstan in 2010 has been identified. The dead, part of a local population of 26000, were mostly females who had recently given birth, which suggests that their calves also died. The population had just been through an unusually harsh winter, so these deaths represented a severe blow. A recent investigation by Prof Richard Kock of the Royal Veterinary College suggests that the cause of death was similar to bloat – a gastro-intestinal ailment brought on by eating too much rich, warm wet grass.

Sadly, saiga are naturally prone to mass mortality. In the past, when the species was abundant throughout its range, this was not a problem. But uncontrolled poaching since the breakup of the Soviet Union led to a 95% decline in numbers since 1995, leaving the species at extreme risk of extinction.



It is probably not possible to prevent mass deaths among saigas, but it should be possible to reduce poaching to a level that allows the population to recover from future natural catastrophes. The Saiga Conservation Alliance (SCA) recognised the wave of local concern following the mass mortality of 2010 as an opportunity. With funding from PTES, a project was launched to mobilise public opinion and support for saiga conservation whilst saigas were at the forefront of local concerns. The project tackles poaching by engaging local people directly in a saiga monitoring programme. As a sense of local ownership of saiga grows, poaching becomes socially unacceptable. The SCA's partner organisation, the Association for the Conservation of Biodiversity of Kazakhstan (ACBK) has a strong grassroots network for sharing experience, building

EUROPEAN WOLVES



Returning wolves spare livestock

Grey wolves have been resident in eastern Germany for the last eight years, having spread over the border from neighbouring Poland. The newly re-established German population has been subject to close scrutiny, by conservationists pleased to have them back, and by people concerned about impacts on farming and other human interests. A study by biologists from the Senckenberg Museum of Natural History in Görlitz published in *Mammalian Biology* offers reassurance. Analysis of over 3000 wolf scats suggests that livestock make up less than 1% of the hunters' diet. By far the most common prey is roe deer, with red deer and wild boar second and third. Interestingly, wolves in the Polish source population favour red deer, so the German diet is evidence of rapid adaptation to the new territory.

NELSON'S COLUMN

A nation of animal lovers?

Welcome to our brand new magazine. I hope you like it. We aim to have something for everyone.



One of our current priorities, reflected in these pages, is urging people to keep their gardens wildlife friendly to help hedgehogs and other small mammals as well as stag beetles, butterflies and countless other species. The astonishing response to Hedgehog Street (see p20), and to earlier calls to create wood piles for stag beetles, suggests that we really do care about the wildlife around us and are happy to go to considerable lengths to do something to help.

Strange then, that over the past few weeks there have been several articles in the press about the 'evils' of certain urban visitors. Giant foxes are 'mugging' people of their groceries in dark alleyways. Grey squirrels are eating all the birds' eggs and rats are apparently jumping at our throats. Foxes will take food where they can scavenge, it's true, but are easily shooed away and there's no evidence they are getting bigger. Squirrels (grey and red) do occasionally eat eggs and fledglings, but not that many. And rats jump to escape, not to attack.

Contrast this with typically over 5000 annual hospital admissions resulting from people being bitten or struck by dogs. Or the annual toll of about 50 million bird kills by our cats. It seems that we can be quite quirky about the animals we love!

To keep the facts straight, and judge where conservation effort is most urgent, we continue to monitor the mammals in our urban spaces through our annual Living with Mammals survey. Next time we will bring you this year's results.

Best wishes

Jill Nelson

Jill Nelson, Chief Executive PTES

SCRaPBook

If you're a supporter of PTES, a previous intern or the recipient of funding please keep us up to date with your news, tell us about your latest project, your new job or your wildlife encounters. We love hearing from you and seeing your pictures!

In Chile, Francisco Fontúrbel is busy monitoring a fascinating small marsupial, the monito del monte (*Dromiciops gliroides*) on its favoured mistletoe plants. He sent us this short update.

Dear PTES

At the end of the austral summer, I have accomplished almost all my objectives for 2011–2012. Live trapping did not go very well, but camera-trapping performance was outstanding! I gathered 95 photos of *D. gliroides*, of which 53% were taken in the degraded habitat (eucalyptus plantation with secondary native regeneration). Also, I have recorded 79 videos of animals moving through the mistletoe plants I'm monitoring. You can watch one online at www.youtube.com/watch?v=D-I0iffVZNE. I have sampled the mistletoe plants, prepared a measurement matrix for further analysis and performed a fruit removal test. Another bout of camera monitoring will be completed in April, and when I have that data I will proceed with the analysis. As soon I have more news I will let you know.



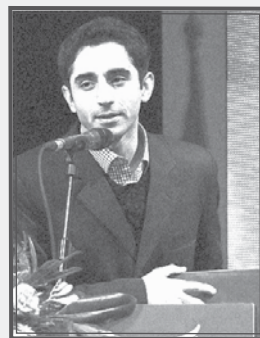
PTES on the road

Come and see us at one of our summer outings!

27th May Big Nature Day, Natural History Museum, London
15–17th June Bristol Festival of Nature, Harbourside
23–24th June ExtInked Activity Weekend, Royal Botanical Gardens, Edinburgh
12th July Connect with Countryside Schools Day, West Sussex
14th July Sutton Ecology Centre Summer Fair, Surrey
17–19th August Bird Fair, Rutland
21st–23th September Bentley Weald Woodfair, East Sussex

Leopard film wins Iranian 'Oscar'

A documentary made by our friends at the Iranian Cheetah Society received Iran's top film-making award. Fathollah Amiri accepted the Best Documentary Feature award for *In Search of the Persian Leopard* at the Fajr International Film Festival in Terhan in February.



Iranian Cheetah Society

Mexican otter spotters...

Jimena Guerrero Flores is using PTES funding to establish the status of Mexico's native otters. Jimena reports that her first survey season was successful, with plenty of scats and some tissue samples collected, and genotyping well underway in the lab. The biggest challenge has been bureaucracy – it's not easy to arrange the export of samples from Mexico to the UK. But with another season to go, Jimena is on track to complete her project next year.



Jimena Guerrero Flores

PUBLICATIONS

Former PTES intern Emma Bush got in touch to let us know her research on the effects of deer browsing on small mammals has been published in the online journal PLoS ONE (www.plosone.org). PLoS ONE 7(2): e31404. doi:10.1371/journal.pone.0031404

Readers interested in Pat Morris' work on wildlife bridges may like to look up his recent article in the journal British Wildlife. The article is co-authored by Japanese dormouse expert Shusaku Minato. See British Wildlife Vol 23 No 3, February 2012



Jill Nelson was delighted to accept £1000 from Bob Parmenter, MD of Shrewsbury-based veterinary pharmaceutical company, Dechra. Our thanks to the employees who voted for PTES to receive a donation as part of Dechra's community engagement work.

Dear PTES

Thanks for checking up on us. The typhoon you heard about in December hit mainly Mindanao Island in the southern part of the Philippines, thankfully well away from our project site in the northeast. The floods in October were closer, but downstream of our site, so there was no direct impact on our project or my colleagues. The flooding was caused by deforestation and this is something your funding will help minimize in future through reforestation and agroforestry.

Best wishes

Sam Telan, Philippine Crocodile Project

Meet the team....

PTES is run by a team of 13 dedicated members of staff, guided by a board of five trustees. All are committed to making sure the support you give is used to maximum effect. We thought you might like to know a little more about them, starting with Henry and Emily.

Henry Johnson Conservation Officer

Henry has just joined us at PTES. He brings an MA in natural sciences (biological) from the University of Cambridge, and a MSc in environmental technology (ecological management) from Imperial College London. Henry oversees Hedgehog Street and the hedgehog hibernation survey and works on noble chafer and violet click beetles. He's also a bit of an orchard fanatic and a part-time trainee butcher! Henry says his favourite things about PTES are working with a team of energised and bright people and the continual exposure to new challenges and different types of cake...



Emily Jones Outreach Officer



Emily joined PTES in 2008, with a BSc (Hons) in biological sciences from the University of Birmingham and experience in environmental education. Her job involves educating, raising awareness and recruiting volunteers and supporters for all our work. Her other interests are exploring London's green spaces and museums, attempting squash and travelling. Emily's favourite things about working with PTES are her meetings with members of the public, supporters and partners, in which she learns something new every day.

A little bird told us...



Chipper Tree @ChipperTree

@PTES We love what you're doing for the Dormice so much that we had to let the world know, by adding you to our blog :) <http://ow.ly/9ZtLo>



Paul @pfgpb

My @PTES living with mammals survey pack has arrived! Can't wait to get started, love the fact that it uses a tin of beans to judge sizes :)



Planetscience @planetscience

@PTES Looking forward to more wildlife surveys – they make great school projects and a fab opportunity for kids to get involved.



Jessica Evans @social_freak

@PTES One of my water vole pics from the wildlife encounter event today. Thanks for such a great day!



Fab picture Jessica!

Jessica Evans

We're delighted to announce the safe arrival of Asta, a daughter to our Conservation Officer Laura Bower, and of Noah, a son to Orchard Officer Anita Burrough. We look forward to having Laura and Anita back after a happy and fulfilling period of maternity leave.



21st century Nutkin

PTES HAS BEEN HELPING BRITAIN'S RED SQUIRRELS FOR MANY YEARS. THE 21ST CENTURY HAS SEEN THEM SQUEEZED HARDER THAN EVER, BUT IT'S NOT A HOPELESS CASE, AND OUR COMMITMENT TO RESEARCH INTO THE CAUSES OF DECLINE AND POSSIBLE CONSERVATION STRATEGIES CONTINUES.

BRITAIN'S ONLY native squirrel, the red, has been disappearing from parts of its natural range for a century. In mixed and deciduous forests across England and Wales, it has fared badly in competition with the introduced American grey squirrel, and now survives only in remnant populations in northern England, North Wales (mainly Anglesey) and on isolated islands off the south coast (the Isle of Wight and Brownsea Island). It remains widespread and relatively abundant in Scotland, where it retains a competitive advantage over greys in the dominant coniferous forests. Being smaller and more nimble than their robust American cousins, red squirrels are able to forage more effectively along the slender branches of pine and fir trees. In Ireland, the spread of grey squirrels has also been slow, but they are encroaching, both in Northern Ireland and in the Republic.

It is now clear that when grey squirrels move in to an area, the local reds tend to disappear within 15 years. But it isn't simply that the larger greys bully or outcompete the reds for food. The main threat to reds is more insidious than that. Grey squirrels are carriers of a viral disease, known as squirrel parapoxvirus or squirrelpox, which is fatal to reds.

The precise means of transmission are not fully known, but there is almost certainly



Peter Cairns/2020VISION/naturepl



no need for direct contact – simply using the same feeding stations is probably enough. Squirrelepox is a particularly serious threat to the survival of British red squirrels, since it has the potential to wipe out whole populations even in areas where they ought to still be doing well. One infected grey squirrel in a red stronghold could be all it takes. And unfortunately squirrel pox isn't the only problem disease – epidemiologists are now also tracking adenovirus, which is also carried by grey squirrels and fatal to reds.

The situation is undoubtedly grim, but the plight of red squirrels has by no means gone unnoticed. The species receives full protection under the Wildlife and Countryside Act 1981, and is a priority for conservation with a Biodiversity Action Plan that aims to maintain and enhance remaining populations, and to re-establish the species where appropriate. Nationwide, many nature reserves and Sites of Special Scientific Interest have earned their status by virtue of having red squirrels, which represent a significant draw to tourists and wildlife enthusiasts. In Europe, red squirrels are protected by the Bern Convention, but not by the Conservation of Habitats and

Species Regulations of 2010, because at present the species is widespread and abundant in its continental range. But pan-European protection measures will be needed in the future – grey squirrels are already well established in Italy and are making their way via alpine passes towards France and Switzerland. The mountains will not hold them indefinitely.

*It's not all bad news.
Red squirrels in some
areas have been holding
out against greys for
many years*

the reds have been holding out against the incursion of greys for many years. But maintaining this *status quo* requires constant vigilance and control of any grey squirrels seen in the vicinity. A reintroduction programme has returned red squirrels to the Isle of Anglesey, and other reintroductions are being considered elsewhere. By necessity these schemes also require grey squirrel control measures to manage the risk to reintroduced reds from squirrel pox. Killing members of an otherwise charismatic species that has been established in this country for over 100 years is distasteful, and unacceptable to many people who have come to love the invader. But ultimately it is likely to be the price that has to be paid for the survival of a much loved native.

It's not all bad news however. Red squirrels have made a comeback in the western Yorkshire Dales thanks to favourable management of coniferous forests there, and in parts of Northumberland

Help red squirrels with a Gift of Nature

PTES Gifts of Nature are a means of donating directly to a chosen conservation project.

Animal lovers will be delighted to know that vital work is being carried out in their name, and each gift comes with a guaranteed warm glow! Gift cards can be sent with your choice of handwritten message.

Visit www.ptes.org/shop or email amy.whetstone@ptes.org for more information.



In the last six years alone, the generosity of PTES supporters has allowed us to fund 12 red squirrel

projects, tackling issues as diverse as habitat fragmentation, squirrelepox infection pathways and the spread of adenovirus.

We've funded the development of new monitoring techniques and the publication of a comprehensive strategy for monitoring squirrel populations.

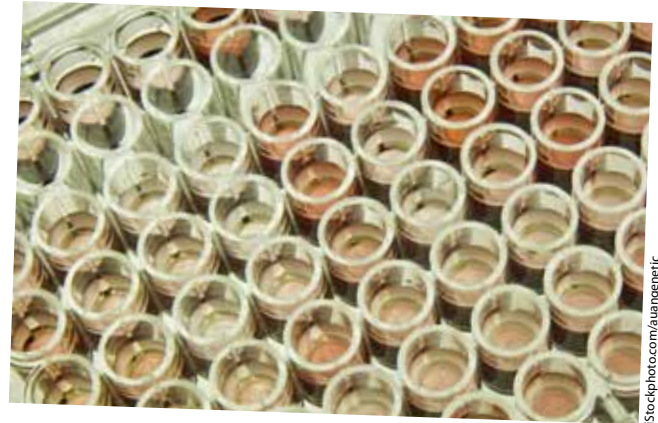
Our most recent grant is to a team at Quercus, the conservation research facility of Queen's

University, Belfast. Overleaf, project leader Dr Lisa Collins explains how they are tackling the recent appearance of squirrelepox in Northern Ireland, an event with serious implications for red squirrels north and south of the border.



JPDuff, Animal Health and Veterinary Laboratories Agency - Diseases of Wildlife Scheme (AHVLA - DoWS)

Red squirrel carcasses are autopsied in the laboratory for macroscopic evidence of cause of death, and tissue samples are collected for further analysis.



istockphoto.com/auargenic

The ELISA test screens squirrel tissue samples for squirrelpox antibodies. Squirrels with antibodies must have been exposed to the virus at some stage in their life.

Tracking squirrel disease

SQUIRRELPOX HAS REACHED IRELAND, AND IF THERE IS TO BE ANY HOPE OF CONTROLLING ITS SPREAD, THE TIME TO ACT IS NOW. DR LISA COLLINS OF QUERCUS, THE WILDLIFE RESEARCH CENTRE AT QUEEN'S UNIVERSITY BELFAST, EXPLAINS HOW A PTES GRANT IS HELPING HER TEAM TO INVESTIGATE.

SINCE THE INTRODUCTION of non-native American grey squirrels (*Sciurus carolinensis*) to the British Isles, the native red squirrel (*Sciurus vulgaris*) has undergone dramatic declines making it a high priority for conservation action. The causes of these declines were thought to be mediated by competition for resources, with the larger and bolder grey squirrel doing better than the smaller, more timid red squirrel. However, the role of disease has recently emerged as a significant factor, with the grey squirrel being identified as a reservoir for two viral diseases, which they can carry without showing any symptoms. Squirrelpox virus and adenovirus are both highly contagious, and usually fatal to red squirrels. There is strong evidence linking the appearance of squirrelpox in an area with a 20-fold increase in the rate of local red squirrel population decline.

Whilst both viruses have been known throughout Great Britain for some time, Ireland appeared to remain disease free. However during 2011, squirrelpox was identified in dead squirrels found at Tollymore Forest Park, Co. Down and in Glenarm Forest, Co. Antrim. The presence of the disease in Northern Ireland threatens to damage efforts to preserve native red squirrels throughout the province. Given the paucity of data on the disease and its epidemiology there is an urgent need to map the occurrence of squirrelpox and develop methods to quantify its prevalence and morbidity.

A research team at Quercus, the specialist wildlife research facility at Queen's University Belfast, is carrying out a programme to tackle the issue; which will help direct current and future conservation efforts. So far, red and grey squirrels have been collected

throughout Northern Ireland, with squirrelpox being confirmed in many grey carcasses. Already the disease has been identified in a red squirrel from Co.



Quercus



Traces of DNA extracted from tissue samples are amplified using a technique known as PCR, then subject to gel electrophoresis, which separates out characteristic fragments of DNA.



When the electrophoresis gels are developed, the genetic signature of squirrelpox can be recognised, confirming infection in that particular squirrel.

se in Northern Ireland

Wicklow in the Republic of Ireland, and adenovirus has been identified in a grey squirrel from Northern Ireland.

Squirrel carcasses are dissected and tested for the presence of squirrelpox using two methods: enzyme-linked immunosorbent assay (ELISA) based antibody detection and real-time Polymerase Chain Reaction (PCR) based DNA detection. The ELISA test is indicative of past exposure to squirrelpox, but cannot tell us whether the squirrel is currently infected with the virus. In order to confirm present infection, we need to detect some element of the virus in the tissues. Virus particles carry within them their own genetic material and we can recognise all squirrelpox virus particles by their DNA. PCR is the laboratory technique used to detect and assess the levels of DNA in a sample. It does this by looking for a specific segment of DNA (a 'signature' specific to the squirrelpox virus) in the sample that we are analysing. Optimising PCR techniques allows us to not only identify, but also to quantify the number of virus particles present in the blood or tissue. If the pox virus signature is detected, it means that

the squirrel was infected at the time the sample was taken.

Our next step is to look at how the disease may be transmitted. This part of the project will take two key approaches. We'll be looking at ectoparasites, such as fleas, and also trying to detect free viruses in the environment. Fleas will be collected from grey squirrel carcasses, whilst feeding stations used for the supplementary feeding of red squirrels

in the wild (also often visited by grey squirrels) will be swabbed to discover whether the virus survives exposure to the elements. In both cases, the virus will be sought using the genetic PCR technique. Recognising the viral vectors, or agents of transmission, is vitally important in order to provide some insight into how the spread of disease might be halted.

If you live in Northern Ireland, you can

Meet the team: the Quercus red squirrel research group.



Dr Lisa Collins lectures in animal behaviour and welfare and leads the PTES funded project into squirrelpox.



The project's research assistant in the field is **David Tosh**. He collects the samples for analysis.



Dr Mike Scantlebury specialises in energetics, life history and parasitism.



Small mammal ecologist **Prof Ian Montgomery** is also director of Quercus.



Dr Neil Reid is a mammalogist and manager of Quercus; Northern Ireland's Centre for Biodiversity and Conservation. Research.



Invasive species expert **Prof. Jaimie Dick** is professor of behaviour, ecology and environmental biology.

The team also relies on the qualitative real time PCR know-how of research assistant **Dr Neil Warnock**, and the expertise of parasitologist **Dr Nikki Marks**.

No place like home for hungry c

SANDHILL RUSTIC MOTH LARVAE ARE PICKY EATERS AND, AS PTES INTERN **DANIEL FLENLEY** HAS DISCOVERED, THEIR FOOD DEFINES THEIR DISTRIBUTION. **MELANIE CLAYTON** REPORTS.

IT'S FUSSY EATING THAT keeps sandhill rustic moths in the dunes of North Wales and northwest England. One of few foods that whets the appetite of the species' caterpillars is sand couch grass, which is served up just the way they like it in the sandhills that stretch along the 22-mile Sefton coast between Southport and the northern edge of Liverpool.

Even if you know where to look for these every hungry caterpillars and their winged adult relatives, it takes patience to spot one. Just ask Daniel Flenley, who led a PTES funded study into the distribution of sandhill rustics along this windswept coastline. Daniel joined forces with Graham Jones (of the Wildlife Trust for Lancashire, Greater Manchester and North Merseyside), project supervisor

Richard Burkmar (Merseyside Biobank) and 14 volunteers to search for the moth. The eagle-eyed team spent a total of 265.5 hours over 25 nights between 5th August and 17th September 2011 searching. That's equivalent to scouring the sandhills for 11 days (and nights) without a break.

Searching for moths one at a time is painstaking, and can result in patchy data. The project aims to develop a more accurate and efficient way of predicting the species' distribution. 'Our coastline changes each year, so sandhill rustic moths have to move around to survive,' Daniel explains. 'Keeping track of them by night-time surveys would be expensive, so we wanted to

see if habitat features such as sand couch grass – which is much easier to survey – could predict the moth's distribution.'

Methods of predicting the whereabouts of animal species using habitat information are known as species distribution models. The sandhill rustic model was developed by Richard Burkmar in 2008. Daniel's new study aimed to test the reliability of the approach by comparing the model's predictions with the reality of distribution determined by a new manual survey. This was the most thorough study undertaken so far, and covered five areas of the Sefton coast. The positive results make all the effort worthwhile. The team concluded that this year, the region is home to more sandhill rustic



Inset: T Davenport

The changing fortunes of a moth hotspot

BERNWOOD FOREST



Melanie Wright

In the summers of 1984 and 1985, leading lepidopterist Paul Waring conducted a series of surveys in Bernwood Forest, near Oxford, recording impressive totals of 171 and 135 species of moth respectively in six trapping sites. Last summer, PTES intern Melanie Wright went back to the same locations to find out what has changed in a quarter of a century.

The total species richness in 2011 was 103, and abundance was also lower than 25 years ago. Melanie's surveys recorded eleven new species – including conifer and grassland specialists. But 44 species present in 1984 and 1985 seem to have disappeared. Of 30 conservation priority species

recorded in the study, 28 were present in 1984, 19 in 1985 and just 8 in 2011. It's possible some of these differences can be attributed to sampling bias – the two studies used different types of moth trap for example, but Melanie's report draws attention to habitat changes in the trapping sites since the 1980s. There has been significant growth of trees and ground flora, and previously open canopies have closed as coppice matured. The study mirrors a bleak national picture of moth decline, and highlights the importance of habitat diversity and the maintenance of

a range of successional stages within woodland habitats. Fortunately this is recognised by both the Forestry Commission and BBOWT, who manage



caterpillars

moths than any other year – 450 in total.

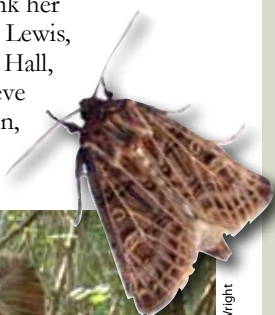
There are two findings that are especially encouraging. The first is that the moth has already colonised the newest green beach at Ainsdale, in the three years since the beach started to form. This is really positive news because it means the moth has successfully crossed unsuitable habitat to settle in a new home.

The second piece of interesting news is that a colony has been spotted at Ravensmeols for the first time. This is more than five miles from the nearest known settlement, and may be related to a colony at Altcar that experts thought had become extinct after 2003.



Bernwood, and better diversity exists in other parts of the forest complex.

Melanie used her final report to acknowledge PTES for supporting her work and to thank her collaborators, Owen Lewis, Eleanor Slade, Peter Hall, Martin Albertini, Steve Carter, Joanne Mason, Keith Porter and Paul Waring.



Melanie Wright

Prunus africana

PTES in Action



Community Action for Development

the medicine tree

COMMUNITY OUTREACH AIMS TO SECURE A FUTURE FOR CAMEROON'S PRECIOUS RED STINKWOOD TREE.

PRUNUS AFRICANUS is an important tree in the mountain forests of Cameroon. Extracts of its bark are used in medicines to treat a range of ailments including urinary disorders, stomach aches, chest pains, fevers, sexually transmitted diseases and mental illnesses. It is also of interest in the development of cancer treatments. Harvesting prunus bark is lucrative (extracts sell as 'pygeum' for up to \$800 a kilo), but unsustainable. Enter Martin Etone, of Community Action for Development (CAD) based in Bangen, Cameroon. CAD aims to conserve prunus by encouraging local people to grow it from seed and harvest the bark sustainably.

Achieving this requires community support, with the aid of a grant from PTES, CAD has been running a series

of prunus sensitisation and conservation workshops. Local chiefs, notables and prunus harvesters were invited and asked to help develop sustainable strategies for using and managing the tree.

Reaching people in these remote communities, and especially those who make a good living illegally stripping the bark from wild prunus trees, is not easy. CAD staff are often regarded as forest guards. Some harvesters openly stated an intention to continue collecting illegally. But Martin and his team now have a kernel of support, with six village communities having shown interest in prunus conservation. With local support, we hope that word will soon spread that there is a better way to exploit this



Community Action for Development

Species notes

Common names: Red stinkwood, African plum, African cherry, iron wood

Scientific name: *Prunus africana*

Height: 10-20m

Habitat: Montane forest, sub-Saharan Africa

Uses: Bark extract used extensively as a medicine, possible anti-cancer properties, fuelwood, timber

Conservation status: Vulnerable to extinction



Community Action for Development

The art of hunting harvest mice

IT TAKES PATIENCE TO SURVEY HARVEST MICE. YOU'LL ALSO BENEFIT FROM THE RIGHT KIT, SOME KNOWLEDGE AND A BIT OF PRACTICAL EXPERTISE. BUT, AS **JIM JONES** HAS DISCOVERED, THE BEST AID IS A TRAPPING BUDDY THAT JUST SEEMS TO HAVE THE KNACK.

WE STARTED TO WONDER whether Mike had harvest mice hidden in his pockets. Perhaps he was a secret captive breeder come to toy with us: approaching a trap, with a magician's sleight of hand he would reach into his pockets and take out a mouse, break open the trap, insert said mouse and reassemble the trap just in time to mumble, 'Think I've got something here!'

How else could we explain that with all three harvest mouse captures we have had at Royal Common, it's been Mike checking the trap?

There is something fitting about it though. Mike's a big chap, the largest of our volunteers, and this somehow reinforced just how small the harvest mouse really is. The captives were mice weighing between five and six grammes, not as small as the pygmy shrews we have been catching at three grammes, but you expect them to be tiny, the clue's in the name. At first glance the harvest mouse is like a doll's house mouse, a perfect scaled-down replica of a wood or house mouse, just smaller. Of course on closer inspection the differences between the species are obvious:



the blunter nose, smaller vole-like ears; the circular eyes, unlike the tear drop shape of the larger mice; and of course that fabulous prehensile tail.

Royal Common, near Elstead in Surrey, gave us our first live harvest mouse capture during the first year of the Surrey Wildlife Trust (SWT) Harvest Mouse Project. The three year PTES-funded project aims to advance our knowledge of the conservation status of harvest mice in Surrey, raise public awareness and promote the species as a flagship for landscape-scale conservation management.

The project is using three different types of live trap; Longworth, Sherman and standard domestic trip trap, to deduce which is most effective at trapping the elusive rodent. Since harvest mice spend a great deal of time in the stalk zone, we've tried mounting each type of trap on a stake as well as placing them on the ground, hoping to find which position is most effective. We've also been using hair tubes and camera traps to compare their effectiveness with live trapping results.

In November, we returned to all the sites surveyed and visited some new ones to train volunteers to search for harvest mouse nests. It's difficult at first, but once you find one it becomes addictive, and soon you can't walk past a grass verge without taking a peek.

So far the project has surveyed eight reserves on the floodplain of the River Wey. We've had positive results at six sites, and at four we've trapped live mice. As I write, we have finished our last trapping session at Thundry meadows, with 10 mice trapped. On the first day we even caught two in one trap. We imagined the scenario: a cautious and lightweight animal managing to sneak in and nibble on the seed in the Sherman, feeling very smug until his less nimble friend barreled into the trap behind him, fighting for his own share... ping! Gotcha!

The SWT team have been assisted by keen volunteers including 'Magic' Mike Galtry. Jo Greenwood has been undertaking her undergraduate dissertation with us, finding and measuring nests and performing vegetation surveys. Another volunteer on a work party, Richard Daborn found four harvest mouse nests at Manor Farm near Woking, which led us to survey there.

We continued looking for nests up to December and collected and dissected owl pellets for harvest mouse remains to determine new sites for 2012. Other work will be the analysis of the first

Jim Jones is Wetland Landscapes Officer for Surrey Wildlife Trust. You can read his wildlife blog at <http://hedgiejim.wordpress.com/> or follow him on Twitter @hedgiejim





Beavers at home in Scotland

THERE'S A SOAP OPERA PLAYING OUT IN KNAPDALE, WHERE OUR INTRODUCED BEAVERS ARE EXPANDING AND MAKING THEIR MARK ON THE LANDSCAPE.

MELANIE CLAYTON REPORTS ON THE LATEST FROM THE SCOTTISH BEAVER TRIAL.



AS MOST OF US WERE trying to remember how to work the central heating late last autumn, the Eurasian beavers of Knapdale were also preparing for winter. Since they hail from colder climes – their native Norway plunges into a deep freeze every year – they are adept at stocking up their larder to see them through the coldest of cold snaps. They don't hibernate, so need to gather sustenance to fuel their winter activity. They fell nearby trees and shrubs and transport them home, carefully accumulating a big enough larder to last them through until spring.

The first of these beavers was introduced to Mid-Argyll in May 2009, as part of the five-year Scottish Beaver Trial (SBT). There are now four beaver families, which project manager Simon Jones and his team are monitoring closely.

'We're delighted with the progress of the trial so far,' says Simon. Indeed, there is a lot to be delighted about. Two of the four adult beaver pairs have produced young two years

running, and the team hopes that this will be the year when some of the younger females follow suit, giving birth to their own first offspring. Time will tell – we hope the 2012 kits will emerge in mid to late summer.

It may seem like a case of happy families, but on closer inspection things aren't quite as they seem. Trude, a young female beaver, has traded in her mate Christian, for Eoghann, former partner of Elaine, who has happily coupled up with Trude's ex. It's no wonder the frisky mammals have had a starring role in BBC's *Springwatch*.

The SBT team are eagerly awaiting the next episode of the soap opera. Infra-red cameras help them stay tuned, offering insights into the feeding, lodge-building and grooming habits of the animals. The cameras are also useful for checking the tags used to identify and track the beavers, and for monitoring their health.

But there's nothing quite like rolling up your sleeves and taking a closer look. Field

operations manager Roisin Campbell-Palmer and field officer Rob Needham have been carrying out live trappings across the four lochs where the beavers were released, giving the animals health checks and replacing missing tags. The trapping has also offered an opportunity to take a closer look at the youngsters, sexing them for the first time and implanting microchips.

There's a lot more Simon and his colleagues want to achieve before the trial comes to an end. A new Education Ranger, Olwen Hemmings, has just been employed and the next few months will see an extension of the already very successful educational programme; a new viewing facility being built at the Dubh Loch beaver site, and the development and distribution of SBT merchandise to help spread the word about this important project.

'The funding we've received from PTES is vital,' says Simon. 'We're learning so

Latest UK mammal grant awards

PTES awards grants worldwide for practical research to make a real long term difference to endangered species and their survival. Small grants are given for pilot work or for discrete projects, and continuation funding is available for more ambitious work. In addition we have a special campaign to help Britain's mammals, which has already raised and spent over £1 million. We are indebted to the experts who help us prioritise the applications. In January we awarded over £82 000 to seven mammal projects:

Dr Lisa Collins, Queen's University Belfast, for red squirrels
Neil Reid, Queen's University Belfast, for Irish hares
Johnny Birks, Swift Ecology and Worcestershire Wildlife Trust, for Bechstein's bats
Richard Grogan, Hampshire & Isle of Wight Wildlife Trust, for dormice
Dr Paul O'Donoghue, University of Chester, for wildcats
Zoe Pittaway, formerly FWAG, for bats
Gina Rowe, Warwick Wildlife Trust, for dormice

Helping kids and cats

IT'S NOT EASY TO LOVE BIG CATS WHEN THEY THREATEN YOUR WAY OF LIFE. BUT FUNDING FROM PTES IS HELPING TO HARMONISE HUMAN-CARNIVORE RELATIONS IN THE RUAHA LANDSCAPE OF TANZANIA.

LARGE CARNIVORES

TANZANIA IS ONE OF the world's poorest countries, a nation where 44% of people are undernourished and almost half lack access to adequate safe water. But Tanzania is outstandingly wealthy in terms of biodiversity – listed alongside Brazil and Indonesia as a Megadiversity Nation. This diversity includes several of the world's threatened carnivores – species such as lions, cheetahs and African wild dogs. Tanzania is obligated to conserve these species for the sake of the rest of the world, and to maintain its tourist industry, which accounts for 15% of GDP. But for local people, the presence of large carnivores is a threat – not only to their livestock but also to their own lives. It is often difficult to reconcile the needs of the carnivores with those of the people, as the communities that pay the highest price for the continued presence of predators are unlikely to be the recipients of any associated benefits.

With the aid of PTES funding, Amy Dickman and the Ruaha Carnivore Project (RCP) are addressing the problem. The RCP helps communities protect themselves and reduces the perceived cost of carnivore predation. It is also seeking to create tangible benefits for the communities that are directly linked to the presence of carnivores nearby. Outreach work at 21 villages in the region has identified education as the single biggest need, and so the RCP has set up a new initiative, *Kids 4 Cats*, in which schools in the UK and US twin with those in Ruaha, and help them by raising funds for books, pens, teaching supplies, uniforms, furniture. All supplies are clearly linked to RCP and thus to the presence of large carnivores.

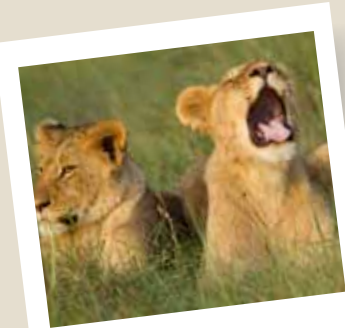
Kids 4 Cats is set to run for four years,

Repatriating pangolins

SUNDA pangolins from Vietnam are threatened by an illegal trade in live animals. Many attempted exports are intercepted, but there remains a problem of how to return the kidnapped animals to their rightful home. PTES has awarded funding to the Carnivore and Pangolin Conservation Programme based at Cuc Phuong National Park, to support the development of an effective release protocol that will maximise survival of repatriated pangolins and minimise risk to wild populations. A team of young Vietnamese researchers led by Daniel Willcox has begun camera trapping the proposed release area and working to raise public awareness of the



Carnivore and Pangolin Conservation Program



Amy Dickman, and top iStockphoto.com/ Jason Prince



BARBASTELLES

A fortified haven for bats

AN ABANDONED FORTRESS in the northwestern Ukraine is a magnet for bats, including startling numbers of rare barbastelles. Project coordinator Dr Andriy-Taras Bashta had his suspicions that the site was an important bat roost, and he applied for PTES funding to carry out a full survey. The fort, near Tarakaniv in Western Polissya, lies on a flat plain with a distinct lack of caves, potholes, mines or catacombs. Andriy-Tara believed this would make bats more likely to use buildings such as castles and fortresses as roosts. The extensive ventilation channels and underground corridors of the fort were very promising, but the results of Andriy-Taras' winter surveys exceeded all expectations.

The team discovered wintering roosts of barbastelles, Daubenton's and Natterer's bats, brown and grey long-eared bats, serotines and noctules. The numbers of barbastelles discovered make this the largest known winter roost for the species in Eastern Europe, and one of the largest in Europe. With evidence of the site's importance now collected and published, Andriy-Taras is preparing a case for the fortress and its bats to be properly protected.



Andriy-Taras Bashta

hedgehog You are the champions!

PTES in Action

IT'S NOW A YEAR SINCE THE LAUNCH OF *HEDGEHOG STREET*, OUR CAMPAIGN TO HELP BELEAGUERED HEDGEHOGS IN YOUR NEIGHBOURHOOD. **HENRY JOHNSON** REPORTS ON THE MAGNIFICENT RESPONSE SO FAR AND EXPLAINS OUR NEXT STEPS.

THE HEDGEHOG IS ONE of our most charismatic and popular native mammals, but there are signs that the national population is declining alarmingly. In response, PTES and the British Hedgehog Preservation Society (BHPS) set up *Hedgehog Street*; a nationwide campaign to motivate people to improve their gardens for hedgehogs. Since last spring, over 20 500 of you have signed up to become 'Hedgehog Champions' and received or downloaded an information pack to help inspire people in your area. We can now start to ask what all of this has achieved. Is *Hedgehog Street* helping to ensure that the hedgehog remains a familiar visitor to British gardens?

In 2006, PTES and the BHPS received 22 000 records for Hogwatch, the biggest national hedgehog survey ever undertaken. The species was present in 75% of survey sites, demonstrating that it was still widely distributed across the UK, although people felt they were less common than previously. The first real evidence for a decline came from our Mammals on Roads survey, wherein year-on-year counts of dead hedgehogs in England and Wales fell noticeably. When considered alongside records from other surveys, such as our Living with Mammals and the British Trust

for Ornithology's annual Breeding Bird Survey, the situation was deemed serious enough for the hedgehog to be assigned the status of a 'priority species' for conservation in the 2007 UK Biodiversity Action Plan.

Research by Dr Anouschka Hof at Royal Holloway University showed that hedgehog declines are correlated with habitat loss and fragmentation, and with increases in badger numbers. In urban and suburban areas, changes in the way gardens are managed have also affected hedgehog population viability. Where garden boundaries are impermeable to wandering hedgehogs, and roads become busier, populations can become isolated and unsustainable. Gardeners who are too tidy or who tarmac their land deplete foraging, nesting and hibernation opportunities.

The root causes of the hedgehog's problems are complex and incompletely understood. More research is needed, particularly in rural scenarios.

PTES and BHPS are funding work at WildCRU, University of Oxford, in which radio-tracking will



help show how hedgehogs use arable farmland in Oxfordshire. The findings will be invaluable in guiding future conservation.

The Hedgehog Street campaign is an example of a new form of research that falls under the umbrella term of 'citizen science'. This is where large numbers of untrained volunteers can be mobilised to help with a study and coordinated using technology. Recent advances in IT allow organisations like PTES to communicate with tens of thousands of people using websites, email and online surveys. The website has proven a fantastic way to liaise with Hedgehog Champions and facilitate hedgehog-friendly communication, with over 2 000 messages sent between users in the last year and more than 300 images already uploaded to the galleries.

On February 1st, we launched the Hedgehog Hibernation Survey, asking people to record sightings of hedgehogs each month up until the end of August. The Hedgehog Street website was adapted to allow sightings to be logged via a simple form. Research undertaken by Dr Pat Morris in the 1970s indicated a link between patterns of

Henry Johnson coordinates PTES' hedgehog projects as part of his role as Conservation Officer.



Hedgehog Street: the figures so far...

Over 2500 Hedgehog Champions have already completed our online survey to tell us what they've been up to. Over 50% have involved at least one neighbour in the project, making a total of 4 699 neighbours in 3 677

households attached to about 293 hectares of land – 33 times the infield area of the London 2012 Olympic stadium. So far our Champions have created 2 660 new hibernation sites, 5 064 natural feeding areas, removed 3 404 hazards and

linked 4 823 gardens. These figures represent tangible benefits for hedgehogs, and for other species which may not be quite so firmly entrenched in the national consciousness.



Do it **YOURSELF...**

SECRET SURVEILLANCE

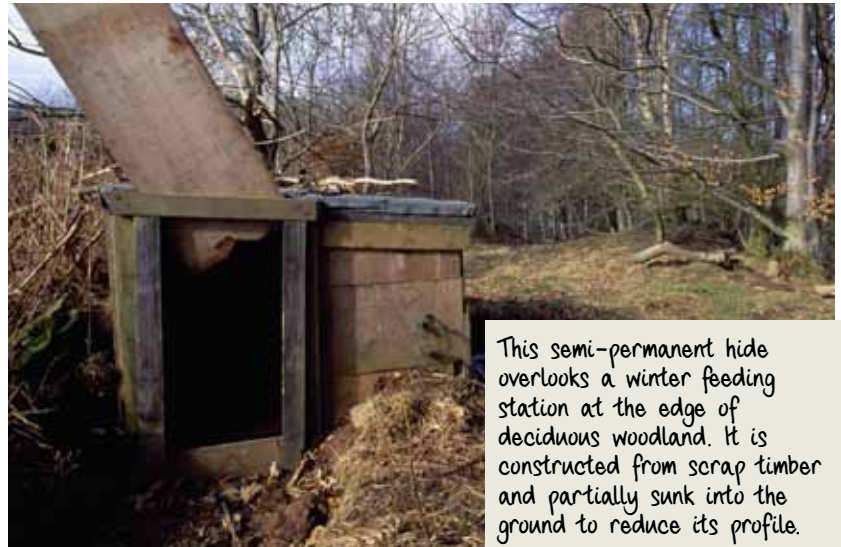
with wildlife photographer Laurie Campbell

Laurie Campbell is best known for his spectacular images of Scottish wildlife
www.lauriecampbell.co.uk



GETTING CLOSE TO WILDLIFE HAS A LOT TO DO WITH FIELD CRAFT, AND USING SOME FORM OF HIDE CAN MAKE A BIG DIFFERENCE. HERE LAURIE SHARES SOME USEFUL TRADE SECRETS.

IF YOU'VE EVER USED one of the permanent, usually wooden, hides commonly found on nature reserves, you may have wished for something similar in your own local wildlife watching spot. Permanent hides can be effective because wildlife becomes habituated to them, but the downside is that they are usually positioned to provide a general view over some likely habitat rather than targeted at anything specific. The alternatives are to purchase a ready-made, portable hide, to improvise temporary hides as you go, or to build something more permanent for yourself. The latter options may depend upon your aptitude for DIY, but with the landowner's permission and using scrap timber and other materials it can be very satisfying to create your own hide in an area you know well.



This semi-permanent hide overlooks a winter feeding station at the edge of deciduous woodland. It is constructed from scrap timber and partially sunk into the ground to reduce its profile.

Almost an invisibility cloak!

If you need to improvise a hiding place in a hurry, then sheets of scrim netting or camouflage pattern leafscreen materials fold up and are light enough to carry around in your pack at all times. Simply throwing them over a tripod mounted camera or telescope immediately provides a screen that you can hide behind, while simultaneously eliminating any telltale gleam of sunlight on metal or glass. Pushing a couple of pointed sticks into the ground on either side and draping the material over them is a simple way of extending the amount of cover between you and your subject.

Ready-made solutions

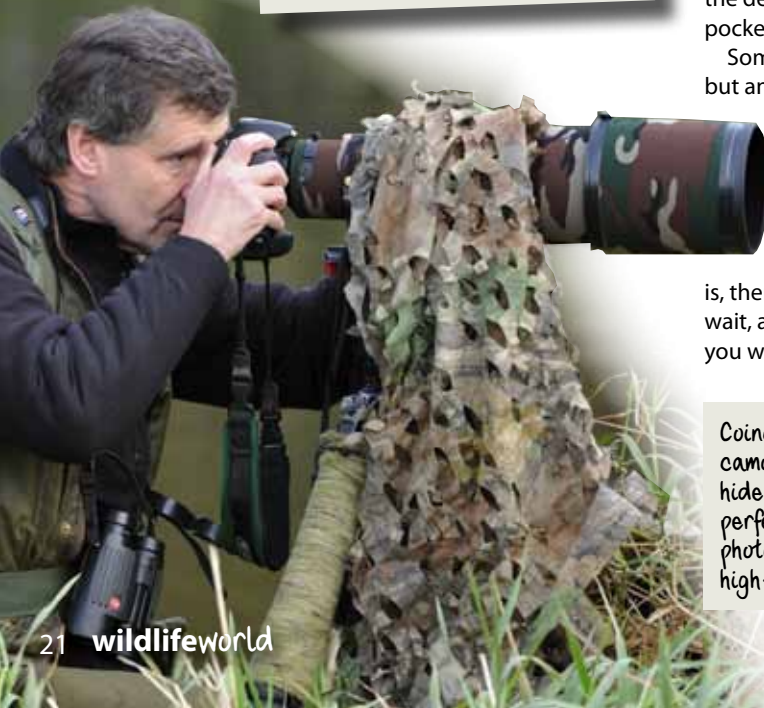
Portable fabric hides come in various guises and have the advantage that they are freestanding, lightweight, portable and quick to deploy. The key features to look for are shower-proofing, a colour that will blend in with the habitat you're working in, and material heavy enough that your silhouette won't be seen when the sun is behind you. It should also be possible to secure the hide firmly to the ground so that it won't flap around. Pitching a hide on loose shingle or bare rocky surfaces requires the design to be free-standing and not reliant upon using tent pegs. Look for skirt pockets inside the hide to which you can add loose stones to give extra stability.

Some ready-made hides are costly, but an alternative is to adapt one of the many inexpensive dome-shaped tents available in outdoor stores and even some supermarkets. The main thing is that you have a shelter that is large and comfortable enough. The better it is, then the longer you will be inclined to wait, and the longer you wait, the more you will see.

Coincidentally, the woodland camouflage pattern of this dome hide matched the surrounding rock perfectly at this site where I was photographing wading birds at a high-tide roost.



With my back to a tree, this very basic screen of fine scrim netting was enough to disguise me so long as the subjects didn't come too close. In this case, I was waiting for otters leaving a holt about 25 metres away.



DIY...

...what else to bring

Binoculars or telescope with tripod

With luck, your hide will give you a closer view of wildlife than you could otherwise achieve, but you'll still find binoculars or a telescope invaluable.

Mounting your lens on a tripod will make it easier to use and reduce the need for you to move about.

Camera

Even if you don't have a big expensive camera or are more interested in observing wildlife than photographing it, a few photographs will serve as an *aide memoire* to what you've seen.

Notebook or recording device

Bring a means of recording everything that you see and think about.

Food and drink

You can bait the viewing area with food to tempt your subject – put out plenty so you don't have to keep restocking. And bring a picnic for yourself, but bear in mind strong-smelling food may alert animals to your presence.

Appropriate clothing

Wear muted colours as a further layer of camouflage. Gloves are good for disguising pale hands operating cameras etc. Bring plenty of warm layers, as you may get chilly sitting still in the shade of the hide, even on a warm day. Avoid fabrics that rustle when you move.

A folding chair or seat pad

You'll soon find yourself getting cold, uncomfortable or fidgety sitting on the ground, so bring something to insulate and cushion your position.

Patience

As much as you can muster!

Blend in using local materials

Having identified the ideal spot to erect a hide, add naturally occurring camouflage materials which don't involve uprooting living plants or damaging the habitat. Driftwood, rocks, dead seaweed, leaves and grasses can all be utilised. Use gardening gloves to protect your hands and secateurs or a folding pruning saw to deal with dead branches. A roll of biodegradable garden string and a penknife are ideal for holding everything in place. Hiding a hide is a challenging but creative process, which is very satisfying when done well.



Here I'm using a 2m x 2m sheet of fine scrim netting which I permanently carry in a jacket pocket. This picture shows it draped over the top of a semi-circular wall of rocks I'd stacked on the shore of a loch to photograph black-throated divers.



Constructed from dead branches a large sheet of government-surplus canvas and lots of bracken, this hide overlooked a feeding area for young white-tailed sea eagles at a release site in the North West Highlands of Scotland.

Apart from a small sheet of scrim netting and a layer of polythene to line the roof, this hide is constructed entirely from dead branches and heather. I slept in it so that I could photograph red deer visiting an ancient pine forest in the early morning.



Now you see it...

Using a temporary hide successfully often requires it to be introduced in advance to allow time for the subject to become familiarised with it. In public areas too, there is also the possibility of hides attracting unwanted attention so it's always best to try and blend them into the landscape. Take advantage of features

within the landscape to break the outline, such as trees, walls, rocks or ditches. Consider too, the senses of your intended subjects. Most mammals, for example have a much more acute sense of smell than our own so it's essential to consider prevailing wind direction and elevation to reduce the risk of them catching your scent. The higher you can be above their noses, the better.

This sequence shows how I used naturally occurring materials to camouflage a box-shaped canvas hide in a rather open habitat



Parting shot



Wahyuni Bakhtiantoro/IFAW/Specialist Stock

Our parting shot is the orangutan, a Malay word for 'forest people.' These critically endangered red apes are now restricted to the steamy jungles of Borneo and Sumatra. Over the last 20 years, an estimated 80% of orangutan rainforest has disappeared and only around 2% of what remains is legally protected. PTES funds urgent work reducing the conflict between the crop-raiding orangutans and the ever-encroaching human populations around them.

Your support is vital.

Thank you.

