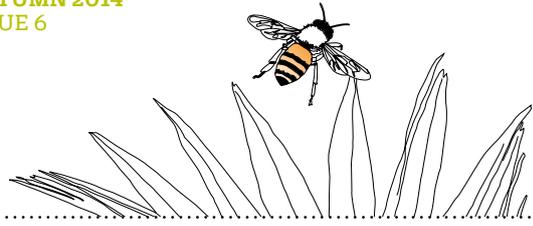


Wildlife World

AUTUMN 2014
ISSUE 6

people's
trust for
endangered
species



ISSN 2049-8268

UK

Risso's dolphins

Norfolk bat magic

Harvest mouse habitat

Noble chafer beetles

It's now or never

Essential action
for Borneo's
orangutans

Overseas

Ethiopian wolves

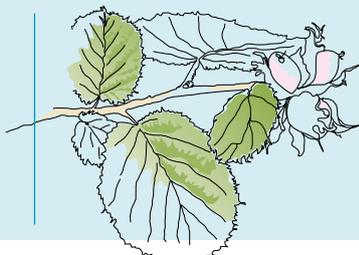
Africa's rare antelopes

Russian butterflies

Hope for Syrian brown bears

Hedgehog heaven

Discover how your garden can become a haven for our best-loved mammal species



Big cats on camera

How evidence from PTES camera traps can save a crucial wildlife corridor in Malaysia

Pine martens

What we're doing to improve the chances of Britain's second rarest carnivore





Bringing the wild back to life

Wildlife World is published by People's Trust for Endangered Species

Our wildlife is disappearing. Almost two thirds of species in the UK have declined in the past 50 years. There's nothing natural or inevitable about this. It can be stopped. And everyone can play a part. That's why People's Trust for Endangered Species exists.

WATER VOLE

Britain's water voles have been a conservation priority for over 10 years. Patchy monitoring was making it difficult to build a clear national picture to show which measures work and where more help is needed. That's why we are using our expertise to develop a National Water Vole Monitoring Scheme, to be launched in 2015. Watch this space for updates.

Find out more
www.ptes.org



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© Northfoto / Pine Cars



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Welcome



© David White

It's hard to believe three years have passed since we began working on issue one of *Wildlife World* magazine, but time has flown. I hope you'll enjoy our more streamlined new look created by the talented Phillip Southgate. As always you'll find this edition packed with project reports and updates from the vital work PTES is involved with around the world. PTES is a relatively small charity, but with no shortage of ambition – the embodiment of thinking globally while acting locally. I'm continually amazed and inspired by what these projects achieve by thoughtful allocation of funds

to people with the passion and expertise to change the fate of threatened wildlife on the ground. Often their actions bring real benefits for human communities too. Read on to learn how your support is restoring balance, informing policy, protecting landscapes and livelihoods and, of course, saving species. Thank you!

Dr Amy-Jane Beer, Editor
twitter.com/AmyJaneBeer

Amy

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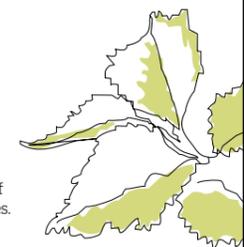
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The opinions expressed in this magazine are not necessarily those of People's Trust for Endangered Species.

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PEOPLE



Garden designer **Tracy Foster's** fondness for hedgehogs resulted in the award-winning *Hedgehog Street Garden* at this year's Hampton Court Palace Flower Show. We asked what drew her to work with PTES and the British Hedgehog Preservation Society.

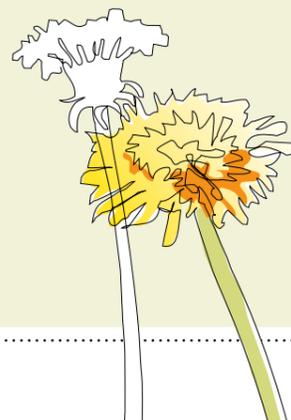
One of my earliest memories is of a family of hedgehogs visiting our Sheffield garden when I was a small child and I'm sure it contributed to my lifelong fascination with wildlife and gardens. When I heard that hedgehogs were struggling to survive because their habitats are being carved up by impenetrable boundaries I realised that gardeners, designers and landscapers have been unwittingly making the problem worse.

When I found out that the *Hedgehog Street* project was looking to create a show garden I immediately sent them my ideas and was lucky enough to be chosen. The garden was designed to show people how easily they can help hedgehogs and still have a stylish garden—and what better place than a garden show to get the message across?

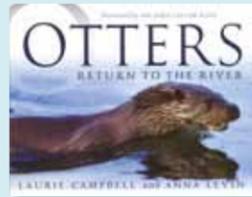
Producing the show garden was a fantastic experience, and I learnt so much about hedgehogs along the way. It was wonderful to see how enthusiastic the public are about making holes for hedgehogs to move between gardens and now I'm making sure that every garden I work on has a hedgehog hole or two! ●

Find out more about becoming a volunteer
www.ptes.org/volunteer

“
I realised that gardeners have been unwittingly making things worse for hedgehogs
”



PTES
★
LOVES



**OTTERS:
RETURN TO THE RIVER**

Laurie Campbell & Anna Levin
£14.99 (paperback)

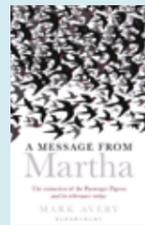
This beautiful book has been many years in the making, but the results of photographer Laurie Campbell's extraordinary patience and field craft are worth the wait!



HEDGEHOGS

Pat Morris
£14.99 (hardback)

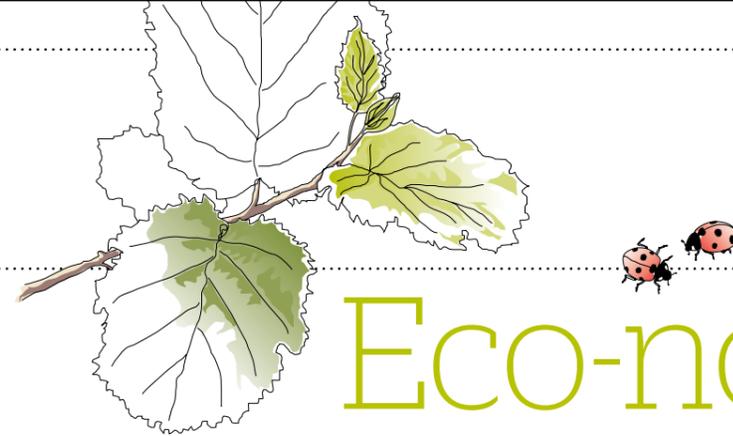
Revised and updated, this classic from the Whittet British Natural History Series is the best introduction to hedgehog biology we know—a must for every natural history bookshelf.



**A MESSAGE FROM
MARTHA**

Mark Avery
£16.99 (hardback)

The thought-provoking story of the passenger pigeon, a species extinct for 100 years, is far more than a lesson in history. Avery's insights also have much to say about conversation today.



Eco-nomy

Have you noticed that ecology and economy have the same root? Eco is from *Oikos*, the Greek for 'home'. Hence ecology is the study of home, and economics is the management of it. The two are inextricably linked. As political parties jostle for pre-election position, **Amy-Jane Beer** asks what they're going to do about the real eco-nomy?

Our friends at RSPB recently launched a campaign to push environmental issues up the political agenda, asking us to 'Vote for Bob', a chirpy red squirrel. Bob isn't really a squirrel. Bob is a lapwing. Bob is any native bird you care to mention. Bob is a badger. Bob is habitat. Bob is the planet. Bob wants you to use your vote in 2015 to show you care. By all means, support Bob, because your voice counts. But let's not pretend that would be job done.

As any campaigner will tell you, nothing gets your view across better than direct communication—be it a letter, an email, or a personal challenge to the candidate on your doorstep. Prospective MPs don't come to my door—we're off the beaten track. But this time I'll be seeking them out. We should all do so, because we all know things they don't, and understand things they prefer to ignore.

The Infrastructure Bill passing the Lords this summer was ostensibly about planning. But it included other new legislation, some of it highly damaging to conservation, including reassigning any species 'not ordinarily and naturally resident in or visiting the UK' as non-native. These include European beavers, whose controlled reintroduction PTES has supported for years, and other extinct natives such as lynx. It also includes re-established and naturalised species on Schedule 9 of the Wildlife and Countryside Act—red kites, large blue butterflies, capercaillie, common cranes, wild boar, little owls, white-tailed eagles, brown hares, cornflowers and corncockles, choughs, corncrakes—even barn owls. Native vs non-native is a hot topic in conservation circles, but it's a question as artificial as national borders. Worryingly, a host of ecologically and culturally important species could find themselves unprotected—or even

subject to legal eradication efforts. An outrageous prospect. Environmental lawmaking should be about ecology, not economics. At its most asinine, the law can protect badgers with one arm, and shoot them (badly, as it turns out) with the other. It can flip the status of the common pheasant from non-native



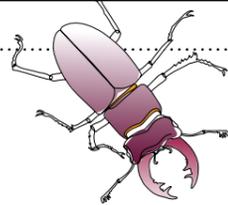
Government policy can, and will, reassign the value placed on our wildlife, unless we make our informed opinions clear

livestock at hatching to wild (read 'native' for purposes of the Infrastructure Bill) so that it can be set free with millions of others into specially managed woodland and, come 1st October, shot. If sheep broke into your garden and wrecked it, the farmer would be liable. If pheasants do the same, well sorry, they are 'wild' animals. However once dead, they deftly metamorphose into livestock again to smooth the sale and export pathways for their meat. Those that escape the guns are also reclassified, just in time to be rounded up for breeding. This legal shapeshifting has nothing to do with ecology, and everything to do with stakeholder interests. Policy is powerful. It can, and will reassign the value placed on our wildlife—unless we make our informed opinions clear.

I'm not naïve enough to suggest politics hasn't always been rife with vested interest. On the plus side, we have freedom to point this out, and social media gives us a previously unimaginable power to challenge. A government of any colour should also be green—so it's not about who is elected, it's about ensuring they all pay heed. I wouldn't dream of telling anyone how to vote. But I do dream about ordinary people like me confronting policymakers with the evidence and insisting they act on it. I dream that we really are a nation of animal lovers and I dream that educated common sense will prevail in the future eco-nomics of our island home. ●



Dr Amy-Jane Beer is a biologist, natural history writer, and editor of *Wildlife World* magazine.



Amy-Jane Beer reviews some of the big recent news stories for PTES and the wider field of conservation. A lot happens in six months, but you can also find the latest at www.ptes.org

Scottish Beaver Trial enters next phase

With five years of data to work from, the likely impact of beaver restoration will soon be clear.



The Scottish Beaver Trial, which PTES began supporting at the outset in 2009, reached the end of its five-year monitoring phase this summer. At the end of the monitoring period there were 10 beavers known to be living in the study area in Knapdale, Argyll, including two families of three and four, a breeding pair and a solitary adult male. Over the last five years, these animals have increasingly won the hearts of the public, and the trial was voted best UK conservation project of 2013 by readers of *BBC Countryfile* magazine. The animals will remain *in situ* while the project is assessed and reported but their future is still uncertain. Scottish Natural Heritage is due to make a final decision next year on the future of beavers in Scotland, including the Knapdale trial and the unauthorised population living on Tayside. ●

'Green Oscar' for PTES crocodile hero

The prestigious Whitley Awards 2014 recognised a talented conservationist working with PTES.



PTES grant recipient Tess Gatan Balbas of the Mabuwaya Foundation has been awarded a WWF Whitley Award, known as a 'green Oscar', for her work with one of the world's rarest reptiles, the Philippine crocodile. Tess (pictured below with PTES CEO Jill Nelson) will share £280,000 from WWF-UK with seven other winners, to continue her work communicating, educating, training, consulting and conducting public awareness campaigns. Four locally-designated crocodile sanctuaries have already been established, the crocodile population has increased from 12 in 2001 to 109 in 2012, and the number of croc killings by humans has decreased from thirteen in 1998 to one in 2013. Sir David Attenborough, a Trustee of the Whitley Fund for Nature, said: 'Whitley Award winners are successful because they don't just watch and measure—they act! They are the conservation experts—not us—they know what to do and, more importantly, how to get it done.' Congratulations Tess. ●

Hope and glory for hedgehog projects

Our hedgehog work has found the spotlight this summer, and continues into the winter.



In addition to the valuable publicity generated by the *Hedgehog Street* garden (see *Nelson's column*, opposite), our work with the British Hedgehog Preservation Society has gained further momentum this year. Our National Hedgehog Survey featured on *BBC Springwatch* in June and there was an enormous response—almost 2,000 volunteers wanted to get involved. We have so far recruited 32 regional coordinators across England and Wales,



who are storing and dispensing the tunnels and equipment to the volunteers. Sites have been assigned to around 400 volunteers, half of whom have confirmed they can definitely survey their nearest site. Volunteers were sent the maps for their site so that they could survey over the summer, and into autumn. Meanwhile, we now have over 32,250 Hedgehog Champions rallying support nationwide and 825 new holes for hedgehogs have already been recorded on our national map. ●

Citizen science steps up a gear

Monitoring how wildlife responds to the changing built environment is vital to conservation.



At the end of June our *Living with Mammals* survey completed its 12th season, continuing an unprecedented record of the wild mammals around our homes and workplaces. We received some wonderful pictures of your wild neighbours. Mrs Kingsland from Sheffield sent us this photo of a thirsty visitor to her garden pond (above) and opposite is a wood mouse taking advantage of bird food provided by Mrs Wright from Taunton. Our *Mammals on Roads* survey ended for the year on 30 September. We're delighted with the level of engagement this year and, with a new website and smartphone apps, the survey is really going places. *BBC Wildlife* magazine rated it among the best citizen science apps available, and it featured as 'App of the Week' in *The Sun* newspaper.

We are not the only organisation harnessing the power of citizen science for wildlife. If you've 'got the bug',



please try some of the other great survey apps developed by our friends in conservation, including:

- **Spider in da House** (Society of Biology): record the huge, hairy house spiders that seem to flourish in autumn.
- **iRecord Butterflies** (Butterfly Conservation): learn to identify all British species and automatically add sightings to the national recording scheme.
- **Mammal Tracker** (The Mammal Society): identify resident British mammals with confidence and easily submit your records. ●

Great results from Carnivore Project

Real progress in our project tackling human-wildlife conflict in Tanzania's Ruaha landscape.



In Tanzania, the PTES-funded Ruhua Carnivore Project (RCP) has had notable successes. RCP Director Amy Dickman of Oxford University, WildCRU, reports that 10 acres of land have been donated by Kitisivi villagers for a permanent RCP camp—a far cry from the suspicion that greeted the project five years ago. RCP has awarded a new round of 'Simba Scholarships', enabling five talented local children to continue education rather than leaving school to help support their families. The cause was helped further when RCP Lion Guardians were instrumental in finding a local disabled boy who had become lost in the bush—the lost child was also recorded on project camera traps among images of gazelles, cheetah, lion, leopards, caracals, elephants, aardvarks and an aardwolf. You can follow more of RCP's work at www.ruahacarnivoreproject.com. ●

At last—a ban on shark fin trade

Six species of shark and ray are now protected by international agreement.



Enhanced protection for several species of shark and ray agreed last year by the Convention of International Trade in Endangered Species (CITES) has come into effect. The demand for fins for the fin soup trade in China previously resulted in the deaths of over 100 million sharks a year, and manta rays were also harvested for their gills, used in traditional Chinese medicine.

The new regulations make it illegal to trade parts of manta ray, porbeagle, oceanic white tip or three species of hammerhead shark without a licence. The first arrests have already taken place in Indonesia, where three traders were caught trying to sell a shipment of manta ray gills. It's positive news, but the ban is not yet total, as the issuing of licences remains the prerogative of national authorities, and Denmark (on behalf of Greenland), Canada, Guyana, Yemen, Iceland and Japan have all declared an intention to continue fishing the listed species and trading between themselves. China, however, has not registered any reservation, so the ban will apply in the main market for shark products, where demand is reported to be declining. ●

DATES FOR YOUR DIARY:

30th October 2014
Hedgehogs at Battersea Children's Zoo
Get hands on with hedgehog themed arts and crafts at Battersea Park Children's Zoo. Join in story-time and meet a real hedgehog!

28th November & 12th December 2014
Starlings & Somerset levels wildlife safari
A day on the Somerset levels culminating in photographing the incredible million-strong starling roost spectacular.

Find out more www.ptes.org/get-involved



Nelson's column

Joining the dots

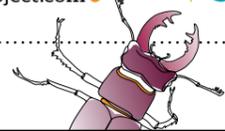
Conservation is as much about communication as practical action. Inspiring people to make a difference is what will count in the long run.

So what better way to enlist public interest and support in our hedgehog campaign with our partners the British Hedgehog Preservation Society than to win a gold medal in July for our *Hedgehog Street* garden at RHS Hampton Court Flower Show? The publicity generated through appearances on *BBC Gardeners World*, *BBC Breakfast* and umpteen radio, online and newsprint outlets was priceless for hedgehogs and led us to also win the People's Choice Award voted by the public. So the message obviously got home and we admit to feeling rather proud of ourselves and our hard work.

Meanwhile, some of you may have noticed our completely revamped website—have a look if you haven't seen it at www.ptes.org and let us know what you think. A good website can inspire action, raise money and reach vast numbers of people effectively. Ours was due a refresh and we hope that our new site works better for the most important people—our supporters and future supporters without whom we couldn't achieve anything. Thank you. ●



Jill Nelson is the Chief Executive of People's Trust for Endangered Species.



Pine martens

The handsome pine marten is the UK's second rarest carnivore—a sleek, sinuous streak of life usually only glimpsed for a second in the shadowy pine forests of its stronghold areas in Scotland and Northern Ireland. English and Welsh pine martens are so rare that a sighting makes the news, but we're hoping that will change as forest management becomes more marten-friendly. Meanwhile, PTES is funding important work to improve our knowledge of this elusive and charismatic predator.

© Northfoto / Peter Gunn



Pine martens to the rescue



Might the pine martens living in Scotland's Galloway Forest Park be the salvation of another rare and charismatic native mammal, the red squirrel?

The Fleet Basin in Galloway Forest Park is a designated Red Squirrel Stronghold, managed by Forestry Commission Scotland (FCS). Currently the resident red squirrels are threatened by encroaching grey squirrels carrying squirrel pox virus. However research in Ireland by **Dr Emma Sheehy** has shown that pine martens can contribute to red squirrel conservation by suppressing grey squirrel populations.

PTES is funding a new collaborative project, involving FCS, Waterford Institute of Technology (WIT) and ecological consultants from Myotismart and Swift Ecology, aiming to record pine marten presence and distribution in the Fleet Basin, establish a long-term monitoring programme and to see what relevance

the pine martens might have for red squirrel conservation in the area.

The monitoring will be non-invasive, relying on genotyping of hair samples collected in sticky bait tubes (pictured), and scats gathered by skilled surveyors and two specially trained detection dogs. Longer-term efforts will make use of 50 specially installed pine marten den boxes of a new lightweight design. Checks of any boxes occupied by breeding martens will provide a valuable indication of how the species fares in the area in future. ●



© Terry Whittaker

Running out of room in Ireland?



Pine martens need plenty of space—and thanks to research funded by PTES and recently published, we now have a better idea how much.

Declan O'Mahony of the Agri-Food and Biosciences Institute of Northern Ireland live-trapped seven pine martens, fitted them with radio collars and tracked them for between four and 10 months. Their average annual home-ranges were plotted at 150.7 ha for males and a slightly smaller 90.2 ha for females. These ranges were stable from season to season and, while there was some overlap between the ranges of neighbouring animals, each individual

also has a core area that was used by no other. These relatively small core ranges (about 23% and 42.5% of the home range for males and females, respectively) are vulnerable to the clear-felling practices currently favoured by the forestry industry, so perhaps it is little surprise that the species is highly endangered in Northern Ireland. Declan estimates that the entire population might be no more than 320, with the Mourne Mountains population a scarcely viable 23. ●

Scrapbook

We love hearing from PTES people, be they supporters or grant recipients. Pictures, reports, emails, web posts and letters give a great sense of your passion for wildlife, so please keep them coming!



Mo on the move

Primatologist Anna Nekaris has been in touch with an update about Mo, the baby slow loris named after 2012 Olympian Mo Farah at the suggestion of PTES supporters. Mo has grown up and moved away from his natal range, rather boldly heading to the forested flanks of a local volcano!



Jilly's in good hands

When hedgehog carer Sue Kidger rescued a mother hedgehog and her six tiny babies this summer, she was worried the trauma of being disturbed on a building site and moved about by several different people might lead to the young being rejected at less than two days old. But happily she turned out to be not only a very healthy hedgehog, but also an excellent mum. Sue gives all her rescue hedgehogs names, and we were touched to learn that this devoted mother has been dubbed 'Jilly', in honour of our CEO Jill Nelson.

Meet the team

PTES is run by 14 dedicated members of staff, guided by a board of trustees. Lauren and Steve are our mapping experts, with skills vital for our various monitoring projects.

Lauren Alexander Data and Mapping Officer



I have enjoyed working in a variety of roles since joining PTES in 2009. I started out as a Mapping Officer on the *Hedgerows for Dormice* project, then became Orchard Liaison Officer for a year before taking on a new permanent position as Data and Mapping Officer. I still work on the dormouse and orchard survey databases, but am also involved with hedgehogs, beetles and all the other work we do, and I'm responsible for ensuring that we share data effectively with others so that it is more widely used to protect our wildlife.

Steve Oram Orchard Biodiversity Officer



My role at PTES is charged with protecting and promoting an important Priority Habitat often viewed as merely a crop. As a child I loved to grow things, from house plants and cacti, to seeds I collected from interesting plants (apologies to Kew Gardens) and weeds that popped up in unusual places. I still harbour a secret penchant for succulents, but over the years nature has found its way to my heart via my stomach as my main interest has shifted to plants that can also be eaten. Following a stint in IT and another at college I pooled my resources and joined the PTES orchard mapping project as a GIS specialist. My work is mostly orchard related, but I get involved with many other aspects of our work including dormouse monitoring and mapping for other projects.



Headline news!

PTES made a media splash this summer, including a great reaction to our award-winning Hedgehog Street garden at Hampton Court with partners BHPS, some lovely coverage of our new look in the design press, a 7-page feature on our dormouse work in *BBC Wildlife* magazine, and another prize for our stand at BirdFair 2014. We won't be resting on our laurels, though. The publicity is wonderful, but we're working hard to turn it into results.

We love our fantastic fundraisers:

Cheryl Wilde and her friends Jean, Lynn and Val came up trumps once again, raising £300 with their tombola stall at the 2014 Maidenhead Duck Derby. Thank you ladies!



North Lambeth's Inner City Players raised £655 with their *Alice in Wonderland* production. Thank you, and what a lovely dormouse!



ShareGift, the share donation charity, has generously donated £1,000 to us. They're a unique charity who specialise in accepting donations of shares which are not worth selling on their own. We think it's a brilliant idea and are really grateful! To find out more about ShareGift, visit www.sharegift.org

Dear PTES

My sincere thanks for giving me the opportunity to attend the 3rd International Conference of Primate Conservation in Indo-China at Cuc Phuong National Park, Vietnam. I presented a paper on the conservation status of western hoolock gibbons in Karbi Anglong, Assam. I met primatologists from all over South and Southeast Asia, learning much about their work and about conservation priorities and trends in primate research.

Best regards

Jihoso Biswas



Western hoolock gibbon



Favourites from Twitter

@Beachy71: my hedgehog hole for @hedgehogsociety. @PTES That wasn't too difficult! #hedgehogstreet

@NigelSymes @Warm glow, first #hoghole mapped in #Bedford on hedgehogstreet.ptes.org



Favourites from Facebook

Juvenile male dormouse from this year's Nottinghamshire reintroduction. He was very feisty! Lorna Griffiths



200 water shrew bait tubes ready to be put out! Thanks PTES, for funding my project! Esther F. Kettel

Publications

Latest publications from PTES projects

Fontúrbel, F. E. et al; *How forest marsupials are affected by habitat degradation and fragmentation? A meta-analysis (monito del monte)* Naturwissenschaften (2014) 101:599–602

Candia, A. B. et al; *Indirect positive effects of a parasitic plant on host pollination and seed dispersal (monito del monte)* Oikos doi: 10.1111/oik.01353

Newson, S. et al; *Bat monitoring: a novel approach* British Wildlife April 2014 pp264–269 (see also page 17)



Primate

update

Of 630 recognised species and subspecies of primate, over half are at risk of extinction. Most are disappearing without anything being done. We are helping as many as we can—and often this means carrying out basic ecological studies of animals previously neglected by science. In all cases, conservation requires the support of local human communities—and we're working hard on that too.

Bonobos

Tracking the least known of the great apes.



Bonobos are restricted to an area of lowland tropical forest approximately 500,000 km², all within the Democratic Republic of Congo (DRC). This is a vast area (roughly the size of Spain), but much of it is difficult to access, let alone survey effectively, and the bonobos are thinly spread.

Keeping track of the apes and the problems they face is virtually impossible using traditional field techniques. But technology is changing things. PTES funded ecologist **Alain Lushimba** of the African Wildlife Foundation and the wildlife conservation authority of the DRC to set about establishing an accurate picture of the situation within one important area, the Lomako-Yokokala Faunal Reserve. Local rangers have been trained in the use of CyberTrackers—robust, handheld computers with specialist recording software and GPS. The data gathered will be used to develop evidence-based conservation strategies to turn the tide in favour of bonobos in this important landscape and beyond. ●

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Hoolock gibbons

The problems facing this rare primate in northeastern India, Myanmar and Bangladesh are familiar, but our response is tailor-made.



More than 80% of the remaining Western hoolock gibbons live in Assam, on the south bank of the Brahmaputra River, and this is where we're helping **Jihosuo Biswas** conduct the first ever baseline study of Western hoolock gibbon ecology, in the district of Karbi Anglong. The region incorporates a cluster of wildlife sanctuaries, reserve forests and proposed reserve forests and has huge conservation potential not only for gibbons, but also for tigers, leopards, elephants, and rhinos. But these forests face enormous anthropogenic pressure too, including severe habitat loss and fragmentation, human encroachment and hunting.

Frontline forest staff lack training and supportive infrastructure and morale is poor. Local communities have little awareness of the problems facing wildlife and lack confidence in conservationists. This has to change, and Jihosuo's work is badly needed. With concrete information on gibbon population, habitat status and



© Shutterstock.com / B-Pict

threats, he will be able to recommend a strategy both staff and communities can have faith in, build capacity and confidence in frontline staff and boost awareness among local people. The result will be an inclusive approach to conservation combining biological research, strategy planning, capacity building, community education and outreach. ●

Bale vervets

New insights into the life of a little-known Ethiopian monkey offer some reasons to be hopeful for its future.



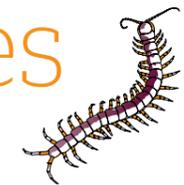
Until recently this elusive monkey was believed to be confined to highland bamboo forests in Ethiopia's Bale mountains. But recent work by **Addisu Mekonnen** of Addis Ababa University has shown that they also survive in small fragments of forest elsewhere, including some where bamboo was eradicated decades ago. While the monkeys consume bamboo almost exclusively where it is available, in the fragmented forests their diet is relatively species-rich. They also use larger home ranges and raid crops, resulting in conflict with local people. While the vervets may adapt well to changing resources, this advantage may be negated by conflict with humans. The long-term prospects for the species remain unclear. ●



© Andrew Atcham

Bengal slow lorises

Lorises try hard to be inconspicuous, but out of sight has also meant out of mind in conservation terms. In parts of India, that is now beginning to change.



Bengal slow lorises suffer a continuous threat from hunting, illegal trade, superstitious killing and habitat destruction, and are predicted to decline by more than 30% in the next three generations over their entire Southeast Asian range. Despite the highest legal protection available in India, Bengal lorises continue to be hunted for sport or traded as food, traditional medicine and pets. Legal protection is rarely enacted because of a lack of specific information about the threats and their impacts on the population. Aside from a handful of distribution records and a survey in 2010 showing lorises to be worryingly thin on the ground in Assam, no research has been conducted on the species in India.

Despite the highest legal protection available, lorises continue to be hunted

In a new PTES project, **Nabajit Das** is investigating the species' status and current hunting and trade threats, and starting new loris conservation programmes in Kamlang Wildlife Sanctuary and Namdapha National Park in Arunachal Pradesh. These will both involve local communities and policy makers. This approach will be the first of its kind to provide the species' status, enable capacity building for the forest personnel and address the cultural drivers behind the hunting of lorises in the region. ●

endangered



The largest of the lorises is still small by primate standards

© Nabajit Das

Orangutans

Living on borrowed time?

Sometimes the battle to save a species is fought one animal at a time. **Gail Campbell-Smith** reports on IAR Indonesia Foundation's efforts to return Bornean orangutans to the forests and ease conflict between wild apes and humans.



LEFT: Mature male orangutans are distinguished by cheek pads, or flanges, and an ability to make the 'long call', which reverberates around the forest, repelling rivals and advertising to females.

RIGHT: Female orangutans rear one young every eight years—the longest breeding interval of any ape.

Our closest living relatives are aptly named—*orangutan* means 'person of the forest'. But those forests are dwindling at an unsustainable rate. Active conservation is all that stands between these two species and extinction.

The Indonesian province of West Kalimantan occupies much of the western segment of the great island of Borneo. Here there are two sub-species of Bornean orangutan. *Pongo pygmaeus pygmaeus* is the most endangered, while *Pongo pygmaeus wurmbii* although more numerous, is also threatened and suffering heavy declines. It's a bleak picture for both. Deforestation, human encroachment into orangutan habitats

The centres are always full. Yet the influx of animals continues

and hunting continue to erode wild populations, while those that remain find themselves increasingly at odds with local people. Orangutans that start to visit agricultural lands are viewed as pests by farming communities and managers of commercial plantations (such as palm oil). So-called human-orangutan conflict (HOC) inevitably increases as natural habitats dwindle and orangutans are routinely captured or killed as they cross plantations to find food. When adult females are killed their infants are often sold in the illegal wildlife pet trade. Many individuals find themselves chained up in backyards or in

cages, barely able to move. The lucky ones may eventually reach one of several rehabilitation centres throughout Indonesia, like that run by the IAR Indonesia Foundation (a partner of International Animal Rescue). We operate a rescue, rehabilitation and reintroduction centre for orangutans in Ketapang, West Kalimantan. Our objective is to return ex-captive orangutans to a true forest life. Rehab and reintroduction programmes not only provide a solution to the immediate problem of displaced orangutans, but can

also help to boost numbers in the wild, increase the viability of populations in areas where orangutans might be at risk of extinction or inbreeding and even create new sustainable populations in areas where the resident orangutans have been previously wiped out.

The problem with this is that suitable release sites in protected areas are hard to find. Maintaining habitat for orangutans is seen as less profitable than other land uses. Meanwhile, the centres are always full and the influx of animals continues. The number of rescued, wild-born animals is now a significant proportion of the entire world's orangutan population, and unless we can find more release areas, a great many of them face a lifetime in captivity.



Fact File

SPECIES NAME

Pongo pygmaeus

COMMON NAME

Bornean orangutan

DISTINGUISHING FEATURES

Large ape with long powerful arms and short legs; hands and feet adapted for climbing, with long digits, thumbs and big toes opposable; body covered in long red-brown hair, except for face; dominant males have wide cheek flanges.

HABITS

Highly arboreal, spending majority of life in trees; adults generally solitary except mothers with young; diet comprises seasonal fruit, with leaves, shoots, insects, honey and birds eggs; highly intelligent, exhibits tool use and cultural traits.

LIFE HISTORY

Young usually born singly after 9 month gestation, first breed at 15 years; live 30–40 years in the wild.

HABITAT & DISTRIBUTION

Primary and mature secondary forests of Borneo; range now patchy.

CONSERVATION STATUS

Endangered (IUCN)

All in a day's work

Working in the IAR orangutan rescue centre is difficult but rewarding, says vet **Christine Nelson**.

Care of the orangutans takes place 24 hours a day, seven days a week. Shortly after sunrise, caretakers begin monitoring and medicating the animals, and preparing food. Transporting the babies and juveniles from their enclosures to their forest playground is a major task. They are intelligent, mischievous and like to explore. Just keeping track of them is tricky! The keepers clean and disinfect cages, prepare environmental enrichment, and collect leaves. Out in the forest the caretakers record behaviour and teach the orangutans survival skills such as climbing, nest-building, and foraging. At the end of a long day of heat, rain and mosquitoes, the last chore is to account for every orangutan. But if the animals are in a playful mood, this bedtime routine can take a long time!



In June, the arrival of two new orangutans, Obi and Muria, brought the number of animals rescued by IAR Indonesia Foundation since 2009 to 100. Far from being a cause for celebration, this milestone illustrates the desperate plight of orangutans in Borneo and the ongoing threats to their survival. The huge influx of orangutans into rescue centres is a big source of concern for all conservation groups, organisations and individuals. If we don't act and do something now, soon it will be too late.

So what else can we do?

It's clear that while rescuing individual orangutans is vitally important work, it is not a long-term solution. IAR Indonesia Foundation's first priority therefore, is to reduce the number of orangutans needing our help. Currently, about 75% of known orangutan distribution lies outside protected areas. Understanding whether and how such landscapes might be incorporated into conservation strategies is crucial for the future of these apes.

Most orangutan captures or killings occur because of habitat destruction, the costs imposed on local agricultural and forest-edge communities and the perception that orangutans are dangerous and worth more dead than alive. Local people often don't understand the connection between the purchase of an orangutan via the illegal wildlife trade and biodiversity decline. This has to change,

and in 2013 we established the first Human-Orangutan-Conflict Response Team in West Kalimantan. As well as rescuing orangutans from the wild or captivity and encouraging law enforcement by the Natural Resources Conservation Agency (BKSDA), the team conducts socio-economic surveys with agricultural and forest-edge communities to get to grips with the issues that drive HOC. They arrange community meetings, school lectures, puppet shows, conservation camping events and film showings delivered by our amazing pedal powered cinema. Local people are welcomed to open days at the rescue centre to learn about orangutan ecology, conservation and the role of protected areas. For many it's a first chance to see orangutans in a non-threatening situation. Perhaps most importantly, IAR Indonesia Foundation is working in HOC hotspots to engage young farmers to patrol and monitor their own farmlands and community lands, turning potential orangutan killers or kidnapers into paid conservationists and spreading messages within their communities.

By working with an array of stake holders using many different media and a genuinely cooperative approach, we are creating a safer future for both orangutans and people in local agricultural and forest-edge communities. Our ultimate goal, and that of many other rescue centres across the orangutan's range, is one day to be empty. ●

More action for dormice

Our efforts to secure a future for hazel dormice in Britain continue apace in 2014.

In June this year, 40 captive bred individuals were successfully reintroduced to Eaton Wood in Nottinghamshire, close to last year's release site at Treswell Wood. This new approach of releasing animals close to other reintroduced populations will give the population an even better chance of becoming firmly established. The release attracted plenty of media attention, including a seven-page feature in August's *BBC Wildlife* magazine. PTES has been monitoring dormice and reintroducing them to parts of their range from which they have been lost for 25 years. The reintroduction scheme was subject to a recent review commissioned by Natural England, the report of which can be downloaded free.

In September, PTES Grants Manager **Nida Al-Fulaij** and Dormouse Officer **Ian White** joined 90 attendees from 14 countries at the ninth international dormouse conference on the island of Funen in central Denmark. Travelling from as far afield as Japan, Iran and South Africa, researchers, conservationists and volunteers came together for four days to share ideas, hear about the most recent research and discuss future plans. The conference included a field trip to see a Danish wildlife bridge spanning both a single and dual carriageway to connect two large tracts of woodland, and a chance to meet Danish foresters and landowners. ●

Find out more
www.naturalengland.org.uk/publications
(search term –NECR144)



Noble chafers – our orchard flagship species

They may be small, but what's good for these beautiful beetles is also good for a host of other special wildlife sharing their traditional orchard habitat.

Alongside scientists from Birmingham, Royal Holloway and Aberystwyth universities, PTES is involved in a unique piece of research to help one of Britain's most striking and rare beetles, the noble chafer.

The project brings together a range of disciplines to learn more about noble chafer ecology, as well as exploring how and why we should preserve traditional orchards, the beetle's habitat. To date, over 24 hours of recorded interviews have been analysed, giving a valuable insight into why people love orchards, how they are managed and how they can be conserved.

We'll be looking more deeply into the noble chafer's genetic variability and how populations differ. Researchers have obtained noble chafer DNA from their distinctive droppings, known as frass. This will be analysed to show if different populations are linked and whether the distribution or patchiness of orchards has

an impact on the viability of populations. We are also creating a synthetic replica of the natural larval pheromone which is thought to help female beetles find a suitable breeding site. This will improve our understanding of what makes a good tree for noble chafers to breed in, and thus help us to manage areas of potentially good habitat in a suitable way. Much has already been achieved through your support for this otherwise neglected species, and we will keep you informed of future discoveries. Meanwhile, there are several ways you can help, for example by volunteering to survey a local orchard, reporting sightings of noble chafers (with an accompanying photograph please) or sending in larval droppings for analysis. ●



an impact on the viability of populations. We are also creating a synthetic replica of the natural larval pheromone which is thought to help female beetles find a suitable breeding site. This will improve our understanding of what makes a good tree for noble chafers to breed in, and thus help us to manage areas of potentially good habitat in a suitable way. Much has already been achieved through your support for this otherwise neglected species, and we will keep you informed of future discoveries. Meanwhile, there are several ways you can help, for example by volunteering to survey a local orchard, reporting sightings of noble chafers (with an accompanying photograph please) or sending in larval droppings for analysis. ●

Find out more
www.ptes.org/orchards
laura.bower@ptes.org

Norfolk bat survey

With PTES help, hundreds of amateur and volunteer bat surveyors have contributed to a ground-breaking study. **Stuart Newson** reports.

With developments in passive bat detectors and software that automatically captures and analyses the sound files containing bat calls, there is the potential to collect and analyse enormous volumes of high quality data regarding these previously tricky mammal subjects.

However, whilst technology has moved on, the considerable cost of the equipment tends to restrict its use. With PTES funding, my team at the British Trust for Ornithology (BTO) in Norfolk are working with other organisations and local libraries to set up Bat Monitoring Centres. Anyone can borrow a passive detector for a few days to find out what bats are present in their local area. We hoped to tap into people's enthusiasm for bats and citizen science, and the response was fantastic.

Over half a million bat recordings will be analysed by the end of the season

Over the course of 2013, members of the public surveyed 4,481km squares, resulting in 1,344 complete nights of surveying and generating over a quarter of a million bat recordings. With over 800 people signing up to take part in 2014, it is expected that over half a million bat recordings will be analysed by the end of this season. This includes several species, such as *Nathusius' pipistrelle* for which there were previously only a handful of records for the county. ●

Find out more
www.batsurvey.org



LEFT: Equipment available from the BTO's Norfolk Bat Monitoring Centres allows anyone to be a bat surveyor.

BELOW: Bats like this pipistrelle can be identified by their ultrasonic calls.



Tall stalks for harvest mice

The clue is in the name – harvesting is an important part of habitat management for these tiny rodents – but that's not all.

Past intensification of agriculture is thought to be behind the apparent reduction of suitable nesting places for harvest mice in Britain. PTES Intern **Ali North** spent five months investigating the effects of farmland management, hedgerow quality and set aside land.

Ali found that land use, hedge density and the presence of grasses like cock's-foot and Yorkshire fog, used for nest construction, all influence the presence and number of harvest mouse nests. No nests were found in grazed fields, so further analysis looked at explaining nest abundance in cut set-aside fields only. The time since the field was last cut emerged as the most significant factor in predicting the number of nests.

Of course the needs of all farmland species have to be considered in land management. Tall herbaceous vegetation may most suit breeding harvest mice, but a mixture of habitat management will benefit farmland biodiversity as a whole. While uncut fields will help harvest mice to build nests, nearby cut fields will provide them and other farmland species with good foraging. Habitat variety is key for allowing harvest mice to thrive. ●

Habitat variety is key for allowing harvest mice to thrive





Big Cat Corridor

We are making sure that the elusive big cats of Malaysian forests are no longer out of sight and out of mind.



ABOVE: Camera traps offer the best chance of recording tigers where they are so thin on the ground.
LEFT AND RIGHT: Melanistic leopards can look almost completely black to the naked eye (right) but their unique spot patterns show up clearly under infra red (left).



There is a crucial, narrow corridor of land left on the Malaysian peninsular that is home to leopards, tigers and clouded leopards. If the land is fragmented, as is threatened, these highly endangered big cats will be immediately isolated and face imminent extinction. To get the land legally protected we need evidence of these secretive creatures to show to the authorities.

We funded **Laurie Hedges** and **Reuben Clements** to set up 130 camera

traps through the special corridor to prove how vital the area is before it's too late. The cameras revealed a density of three leopards and 2.64 clouded leopards per 100 km² and demonstrated that

melanistic (dark or black) leopards can be individually recognised with confidence using infrared pictures. Tigers remained too

elusive to quantify their density although evidence was found of a breeding female.

Not only does this work confirm the corridor as a vital habitat for big cats, the data found will be used as a baseline against which further monitoring data can be compared so that future management of the area can be checked.

As well as the presence of the rare animals, it became obvious that humans were regularly trespassing into the surrounding forest, managing to get

If the land is fragmented, these highly endangered big cats will face imminent extinction

themselves snapped 94 times by the camera traps as well as being seen in person by the research team. This illegal activity was reported. A poacher was arrested on one occasion and on another an enforcement team raided their camp.

The team took the monitoring data and other evidence showing the high levels of

human encroachment into the forest and presented the findings to the Sultan and the Chief Minister—key decision makers in the State of Terengganu—to lobby for the corridor and surrounding area to be protected. The response was encouraging and the signs are good. Further cameras were provided by the government for surveillance. The process of getting land protected in the Malaysian Peninsular is quite complicated and involves several government agencies so the cameras will collect further proof of big cat presence for targeting the forestry department and others.

As this is the first time that any camera trapping study has managed to provide an estimate of leopard population density in Malaysia, and for any species of melanistic leopard, the team are recommending use of the method elsewhere. It should work particularly well where melanistic leopards form a substantial percentage of the population, as is the case in Java and across mainland Southeast Asia. ●

Living with the Ethiopian wolf



The conflict between people and Ethiopian wolves could soon be over.

With a population hovering around 500, Ethiopian wolves are one of the world's most threatened dog species. Since 1988 the Ethiopian Wolf Conservation Programme (EWCP) run by the University of Oxford's Wildlife Conservation Research Unit, has been working to protect those that remain. With earlier help from PTES, EWCP extended its operations from the Bale Mountains (home to the largest surviving population of about 300 wolves) into the Northern Highlands, where wolves live in more scattered populations.

These thinly spread wolf groups live alongside human populations and are at greatest risk of extinction due to habitat loss and degradation. As local biodiversity declines, the wolves' prey base dwindles and they increasingly target livestock, leading to conflict with pastoralists. We have recently awarded a grant

for EWCP, which they will use to increase local awareness of environmental problems, demonstrate the importance of biodiversity and set up a permanent monitoring system to keep track of the remaining wolves in the area. ●



Strange but wonderful



Evaluating the status of Armenia's threatened desert reptiles.

Armenia is home to 59 of the 110 species of reptiles and amphibians found in the Caucasus region. The only true desert in the area, the Gorovan Sands, was given protection in 1959 but sand-mining and livestock grazing still threaten the vulnerable species that live there. With PTES funds, **Levon Agasyan** has been working to gather important data on three key species that depend on this semi-arid landscape. Toad-headed agamas—strange but beautiful lizards—can live for up to four years, laying two or three clutches of eggs a year. But 80% of their habitat has been lost in just over 10 years. Levon spent a year mapping and studying agamas, Transcaucasian race-runners (another lizard species) and spur-thighed tortoises so he could recommend which areas to fence and how best to captive breed these animals to ensure a better future for them. ●



Toad-headed agama



Transcaucasian race-runner



Spur-thighed tortoise

Left: © Shutterstock / Marek Veleckovsky. Middle & right: © Levon Agasyan

Helping hirolas



Why has the hirola become sub-Saharan Africa's most threatened antelope, and what can be done about it?

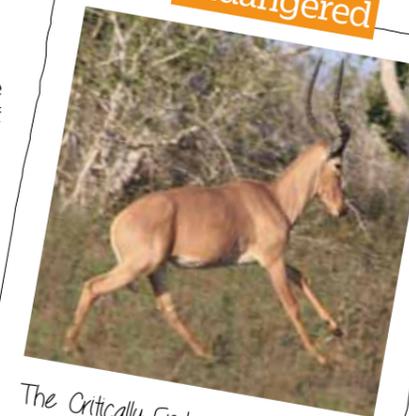
Hirola may be the world's most endangered antelope, with possibly as few as 600 surviving in the wild. In the last four decades their numbers have crashed, primarily as a consequence of disease in the 1980s. Hirola were probably always rare and restricted to a very small geographical range in eastern Kenya and southwestern Somalia, so the recent losses have hit the species extra hard.

Over the past couple of years PTES has been helping ecologist **Abdullah Ali** of the National Museums of Kenya to assess what's happening. He has found it to be a complicated story. Hirola feed on the grasses and herbaceous flowering plants that grow on open, grass-dominated savannahs. However, this landscape has been changing fast in recent years, and Abdullah has been investigating three key factors which might be contributing to the hirola's plight.

Over-grazing by livestock has a great impact on the vegetation and changes the faunal diversity of the area. Suppression of natural wild fires by the local pastoralists is preventing the natural regeneration of the grasslands that hirola require. The local extinction of elephants has also had a dramatic effect. In the 1970s the region supported an elephant herd 8,000 strong. The elephants played a key part in maintaining the landscape, especially keeping the number of trees down. Without the elephants, trees are establishing themselves and turning what was once grassland into a very woody habitat, unsuitable for grazers like the hirola.

Hirola need help, and thanks to Abdullah's work, we now know a lot more about the problems they face, so that the action we take will help this charismatic species. ●

endangered



The Critically Endangered hirola has declined by 80% since the 1970s

© Abdullah Ali

In search of the elusive Ethiopian nyala

Helping a rare highland antelope in one of the world's great mountain wildernesses.

The Ethiopian highlands are a magical place, home to many animals not found anywhere else. One of these is the beautiful mountain nyala—a huge chestnut coloured antelope that lives only in high altitude woodlands. Crepuscular, like many deer and antelope, nyalas live alone or in small groups. They breed slowly—each female has only one calf at a time after a nine month gestation, which she nurtures for up to two years.

There may only be 4,000 nyala left in the wild. So, PTES is working with **Anagaw Atickem** to find out where populations exist, count them and come up with a plan for their future protection. This is no mean feat. Anagaw will be covering an area over 17,000km², using dung pellet counts to identify where nyalas are present and then creating a map of the areas that they use. This will be used to define a robust conservation plan. ●



© Anagaw Atickem

Protecting Russian butterflies

A British approach to butterfly monitoring is helping invertebrate conservationists in Russia.

No-one can deny the beauty of butterflies. But as well as their aesthetic and intrinsic value, their presence indicates a healthy habitat for invertebrates generally, many of which are vital prey for birds and bats.

Conservationist **Svetlana Goloshchapova** of Bryansk University is helping our fight to prevent the extinction of three of the most threatened butterflies in the Bryansk region of Russia: large blues, Danube clouded yellows and false ringlets.

A search revealed new localities for Danube clouded yellows and large blues, but false ringlets appear confined to just a single remaining spot. Local children are now learning about the need to preserve these butterfly havens and the grasslands and bogs that they favour through special butterfly clubs. And landowners are adopting butterfly friendly management practices.

The first national monitoring scheme for butterflies in Russia is now underway, based on the established British model, and five new, protected Prime Butterfly Areas will keep their habitat safe for the future. ●



False ringlet butterfly

Bear patrol brings good news

How DNA analysis of faecal samples from the Iranian Caucasus gives hope for Syrian brown bears.

With funds from PTES, **Ehsan Moqanaki** travelled to the Iranian Caucasus to look for highly endangered brown bears, once found throughout the Middle East.

Illegal killings and widespread loss of habitat now confines these magnificent creatures to small patches of their original mountain home. Forest is cut down for locals to graze their livestock and any perceived or real conflict is dealt with by killing the bears.

It's really hard to work out how many bears might survive by observation alone, so Ehsan and his team trialled a new method, collecting bear droppings and extracting the DNA. Inviting local residents and rangers to help, the team covered more than 200km of trails, collecting over 100 samples. Of these, only 45 were in good enough condition for analysis but they turned out to come from 31 individual bears—great news. The technique will now be used to monitor the bears long-term. ●



© Christian Reich



© Bryony Manley

Dolphins in deep water

So little is known about the charismatic Risso's dolphin, its conservation status is uncertain. Earlier this year, **Bryony Manley** was awarded a PTES internship to study this mysterious species.

Risso's dolphins are unusual looking creatures with a beakless face and often extensive white scarring across their grey bodies. They are the fifth largest dolphin in the world, with a general preference for offshore, deeper water habitats, and thus rarely seen from shore. In mid-June I began my PTES-funded project to study Risso's dolphins off the Isle of Man with Manx

Whale and Dolphin Watch, a small organisation working voluntarily to research and conserve marine mammals.

My project uses two acoustic devices, called C-PODs, to detect the echolocation clicks of dolphins and porpoises. C-PODs are potentially very useful as they operate continuously, even in bad weather when visual surveying is not possible—a

disappointingly frequent occurrence in the middle of the Irish Sea! But they are relatively new technology and not extensively tried and tested, so I'm working to assess their usefulness in the waters around the Isle of Man. In good conditions, I can watch the C-POD locations from land. My visual records will reinforce the acoustic data collected as we try to build a picture

of Risso's dolphin presence. The species is recorded regularly in Manx waters, and sometimes with very young calves in the summer months, so this area appears to be important to them. It's early days yet, but this work should really help to improve the knowledge of this under-researched and interesting species. I can't wait to download the acoustic data and see what I've found! ●

Risso's dolphins are recorded regularly in Manx waters, sometimes with very young calves



And there's more! We don't have room to tell you about every project, but your donations have also been supporting...

BAWEAN WARTY PIGS



© Ilija Franzen

Until recently, the warty pigs of Bawean, a small island off Java, were thought to be extinct. Then in late 2013 a team of Indonesian researchers confirmed the species' continued existence. But these animals have no protection, and are hunted as pests along with wild boar. PTES is funding urgent fieldwork by researchers from the Bawean Endemics Conservation Initiative and Oxford Brookes University to assess the status of the species. ●

HUMPBACK DOLPHINS



© Gill Braulik

The Indian Ocean humpback dolphin was only recognised as a distinct species in 2013 and it remains so new, its conservation status is impossible to gauge. With PTES funding, **Gillian Braulik** of the Wildlife Conservation Society is setting out to establish how many are left in the waters off Tanzania. ●

NEOTROPICAL OTTERS

Jimena Guerrero-Flores used DNA from scat samples to study neotropical otter populations. While those in the South Pacific and Atlantic coasts appear to be doing quite well, genetic diversity of the North Pacific population is worryingly low. Based on these findings, Jimena's report proposes a set of specific conservation actions to help safeguard the otters' future. ●

DIY Hedgehog Friendly Garden



Top tips from PTES Hedgehog Officer Henry Johnson.

Chat to your neighbours. Hedgehogs need access to hundreds of different gardens to survive so the more local people that know about their habits, the better.



Fresh from our award-winning *Hedgehog Street* garden with the British Hedgehog Preservation Society at Hampton Court Flower Show, here are our tips for cutting-edge hedgehog horticulture. No garden can be a good 'hedgehog garden' in isolation—connectivity is key. Encouragingly though, any style of garden can be great for hedgehogs, and you can add value by incorporating features that will benefit prickly visitors, while ensuring hazards are minimised. Pretty much all of it is easy as pie.

Piles o' logs

01 Far better than buying a pre-made hedgehog house, a log pile provides both food and shelter for hedgehogs, all year round. The type of wood doesn't really matter, but bigger is better, so incorporate as many large logs as you can manage. The pile will provide habitat for beetles, millipedes, earwigs, slugs and frogs—all food for hedgehogs. Periodically top up the pile with fresh logs as the older ones rot, and bury a couple at the base of the pile to provide habitat for stag beetles too.

Build an open style compost crate with untreated timber at a fraction of the cost of fancy covered versions. It'll be easier to use, and better for wildlife.



As well as helping hedgehogs, a stack of logs in a quiet corner will harbour a host of wildlife, from wood eating grubs to fungi and hibernating amphibians.

Composting

02 Research has shown that hedgehogs prefer to use medium-sized leaves from deciduous trees, such as oak or beech, to make their hibernation nests. Compost heaps that are open to the elements are also better for encouraging insect life—and will save you tons of money on compost. Just be careful not to spike any residents when you turn the pile.

Privacy, pets and neighbourly relations

Whilst birds, bats and bees are free to peruse even the most isolated gardens, helping hedgehogs involves speaking to your neighbours and thinking about your local landscape. Hedgehogs need access to hundreds of gardens to survive, so there's always more you can do to help them. Keep an eye out for people replacing fences and make sure they or their contractors add a hole. 13cm² is big enough for any hedgehog, and too small for dogs. Adding a small piece of piping to it will dissuade cats. If your fence has a concrete gravel board, dig a small scrape under it. Try and ensure each of your boundaries is permeable for hedgehogs.



Pledge to make a hole for hedgehogs today

Find out more hedgehogstreet.ptes.org

Go chemical free

03 If the National Trust can do it at Hidcote Manor Gardens, so can everybody else. Using chemicals in the garden is completely unnecessary—and bad news for hedgehogs. If the slugs are particularly bad, try wool pellets or nematode treatments (a form of 'biological control'). The biodiversity value of lawns is also under-appreciated—the lower the percentage of grass the better. Avoiding fertilizers and herbicides will encourage flowering herbs that can tolerate close mowing eg bugel, yarrow, clovers and possibly bird's-foot trefoil.



Enriched soils tend to suit a limited range of dominant plants. Limiting fertility gives a much wider range of plants a chance to thrive in the mix.



Whether your tastes are traditional or modern, choose excellent nectar and pollen plants that the wildlife will appreciate as much as you do.



Flowering plants

05 Nectar and pollen are key energy sources for the invertebrates that hedgehogs eat. A diversity of herbaceous plants will also produce lots of different types of caterpillars—a real hedgehog favourite. Avoid traditional bedding plants such as begonias or other style-over-substance varieties bred for purely visual display, as these have often lost their nectar and pollen producing faculties.



If you're collecting garden waste for burning or for bonfire night, make sure you move or check through the pile in its entirety before lighting it.

Untidy corner

04 Formal gardens can be very wildlife-friendly, but try to have one corner where you don't do too much gardening. Plant some perennial species (eg honeysuckle, teasel, red campion) and then leave them to their own devices for the year. Many invertebrates need standing vegetation to overwinter in—for example grasshoppers—and the 'hogs will like it too.



Food and water

07 One of the joys of hedgehogs is their tolerance of people. Undeterred by noise and security lights, hedgehogs will come to food provided for them and can be viewed from the warmth of the living room. Meaty cat or dog food, unsalted nuts and mealworms are all ideal. In drier months, don't forget to provide water as well.



Feeding hedgehogs is a responsibility the whole family can enjoy. Don't forget to clear away any leftovers before they go off, and wash food bowls regularly.



Thanks to our Hedgehog Champions for submitting their photos.

On the menu tonight

Hedgehogs will repay a thoughtful gardener's hospitality many times over with their 100% natural pest control services.



© Stockphoto.com Top left: Alastair Jones Top right: Corinne Hinde Bottom left: Ghazal P Bottom right: Alberto Serrano



© Shutterstock.com / Anam Russ

The human race managed to drive Britain's beavers to extinction by hunting them for their fur, food and medicinal properties. We are proud of the part we played in the trial beaver reintroduction to Knapdale in Scotland.

Mindful of the fate of beavers, we are re-doubling our efforts to save hedgehogs, dormice and water voles—all much-loved but endangered British animals—before it's too late.

Your support is vital.

Thank you.



people's
trust for
endangered
species