Wildlife World

people's trust for endangered species

AUTUMN 2016
ISSUE 10

ISSN 2049-8268

UK

Dormice in focus

Controlling invasive crayfish

Rare scabious bees

Harvest mouse success

Spot on

How our new Conservation Partnerships are helping leopards

Overseas

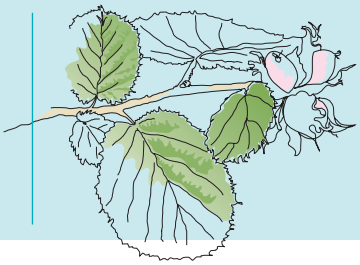
Saving seahorses

River dolphins and manta rays

Pygmy sloths

Giant anteaters

Operation orchard
Traditional orchards are hotspots for wildlife, and we're helping to conserve and restore hundreds of them across the UK.



Nature writing
If you've ever fancied your chances as a nature writer, we offer some valuable tips.

Stop the trade
Illegal wildlife trading threatens thousands of species, and it's surprisingly easy to be taken in by the criminals.

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.

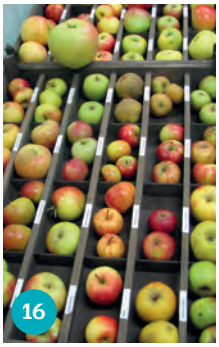
Find out more
www.ptes.org

ADDERS
This secretive species is in serious decline and pockets of local extinction are opening up across the UK – no adders have been seen in Nottinghamshire, for example, since 2006. The main problem is loss of open habitat such as heath and moorland with plenty of sunbathing spots. Britain's only viper seems urgently in need of friends, and PTES is now funding urgent work to find out how bad things really are.

© Jason Woolgar

© Andrena Hartorfiana

In this edition



© Richard Peterson / Shutterstock.com

© Guy Stevens / Manta Trust

© Nisha Owen / ZSL

Welcome

© Dave Willis

This particularly exotic edition of *Wildlife World* is testament to the global reach of PTES, supporting an incredibly diverse range of species – not just the large, beautiful and charismatic, but also the small, the under-researched and the easily overlooked. This same inclusiveness also applies to the people involved in PTES projects. Human communities are part and parcel of ecosystems, and the correlations between poverty and wildlife decline are striking. People with an adequate livelihood don't readily turn to poaching. Those whose livestock are protected or insured are less likely to retaliate against predators. And those who recognise the ecological importance of local keystone species are more willing to live and let live. That's why so many PTES projects take a community approach, winning hearts as well as minds, and not just saving other species, but also bringing out the best in our own.

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

Editor: Dr Amy-Jane Beer
Editorial team: Jill Nelson, Zoe Roden, Nida Al-Fulaij
Art Editor: Zoe Roden
Illustration: Hayley Cove
Print: 4-Print

Cover image:
iStockphoto.com / cruphoto

Contact us
PTES Wildlife World Magazine
3 Cloisters House
8 Battersea Park Road
London SW8 4BG

www.ptes.org
wildlifeworld@pteso.org
020 7498 4533

facebook.com/ptes.org
twitter.com/PTES
instagram.com/ptes_org

people's trust for endangered species

PTES ★ PEOPLE

© Chuck and Fiona Eccleston

After a career in pharmacy, **Fiona Eccleston** was looking for a new challenge. Happily for PTES, she chose conservation and, with her husband, **Chuck** is now an invaluable part of the team at Briddlesford Woods.

I became involved with PTES in 2010 when studying a course in Conservation and Wildlife Management. For the surveying module I chose to study the dormice of Briddlesford Woods on the Isle of Wight.

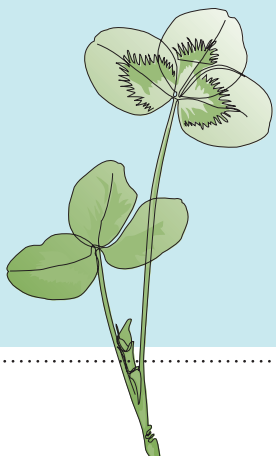
I helped with dormouse box checks and obtained my dormouse license, then went on to help train others who now monitor further sites on the island.

As the number of training courses taking place at Briddlesford increased, Dormouse Officer Ian White was keen to improve the facilities and access. I volunteered my husband Chuck, a building surveyor and project manager to oversee construction. We now have the Island's first composting toilet and a new brick rubble road in place and working well.

Our next challenge was building a dormouse bridge over the Havenstreet Steam Railway line. The 30m prototype was built in sections in our garage and then erected on site. We fitted cameras for monitoring 'traffic', so we know that both dormice and red squirrels are using it. It was great to see it feature in BBC's *AutumnWatch* last year.

A regular highlight of our year is the woodland management weekend in January. It's great fun, a good workout and a chance to learn or improve skills such as coppicing, layering, clearing rides and tree removal. Why not come and join in?

> **"Our next challenge was building a dormouse bridge over the steam railway line"**



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

PTES ♥ LOVES

SECRETS OF THE SEAS

Alex Mustard and Callum Roberts
£12.99

So much more than a beautiful book, Mustard's spectactular photography and Roberts' unrivalled expertise in marine environments give a unique insight into the wonders of planet Ocean.

WILD KINGDOM

Stephen Moss
£16.99

A readable, thought-provoking primer on the state of Britain's wild landscapes – how they came to be and how they might be managed in future for the benefit of people and wildlife.

WILDLIFE APPS

Ecological data collection is easier than ever with hundreds of apps available for logging your records. Here are some to try (they're all free):

iRecord

Mammals on Roads

OPAL Bugs Count

BirdTrack

Think before you click

Professor Anna Nekaris explains why your individual actions are so important in the fight against illegal wildlife trade.

The illegal wildlife trade is heartbreaking, but all too easy to view as a problem caused by other people. It's natural to want to close our eyes to what is cruel and sad. Instead of pictures of apes butchered for bushmeat, or elephants and rhinos slain for ivory and horn, you might prefer to see pictures of rare and special animals looking alive and beautiful or impossibly cute. Social media platforms are full of such material, often with thousands of 'likes'. But beware – such images often belie an ugly truth. The pictured animals may include illegally traded pets and animals exploited as props. The horror and the crime are hidden, but they are there nonetheless.

It's not just a problem online. If you're travelling to an exotic location or looking for a new pet, it can be hard to know if the animals you are seeing are being exploited legally and ethically or not. The safest bet is to start with one easy rule of thumb – wildlife should be in the wild.

In the case of pets, if you see something that seems a bit different, perhaps a slow loris, a kinkajou or a Malagasy radiated tortoise, be wary. Think twice before you 'like' a photo or video of any such animal shown living in captivity. I've worked on slow lorises for more than 20 years. It remains legal to own one in some countries, including the UK, but the law requiring such pets to come from a legally imported lineage (including parents and grandparents) is fallible. I recently visited Japan and found a Critically Endangered Javan slow loris in a pet shop. The accompanying permits suggested it was imported before 2007, when lorises were uplisted to CITES Appendix 1. But this animal was less than one year old, and the documentation blatantly fraudulent. When there are properly domesticated pets available to suit all dispositions, there is simply no need for exotics to enter the trade. Admiration of an exotic animal doesn't give us a right to own it.

© Little Fireface Project

Admiration of an exotic animal does not give us the right to own it

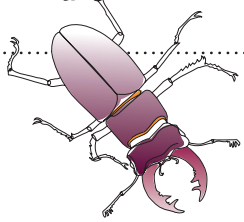
The trade in photo props may seem easier to avoid, but one look at Instagram will show you how easily we can be taken in. Wherever you see a rare animal offered on the street for photos or playtime, alarm bells should ring. The large appealing eyes of many such animals indicate they are nocturnal and suffer when brought out in daylight. Others will be drugged or tortured into performing. And pretty much all spend their off-duty hours caged and frightened.

The trade in animals for meat and medicine is difficult to tackle, as many tourists have no way of knowing what they are eating. However we do know that the welfare of meat animals in many places is poor, and hunting and fishing standards can be almost non-existent, meaning threatened species often end up on the menu. Sometimes it's easier and safer to go veggie, even if only temporarily. One easy product to avoid is civet or weasel coffee, the so-called 'most expensive coffee on Earth'. Visitors to the Indonesian island of Bali are often offered a taste and told that civets run wild in the coffee fields picking the best beans to make a delicious premium product. Sadly most civet coffee actually originates from factory farms, where caged animals are force fed coffee beans until they die. It's far safer (and cheaper) to enjoy a standard cup of coffee instead.

There is no doubt that the world is full of wonders and animals are part of that. And there are safe options. Please browse and 'like' the photos uploaded by reputable charities such as PTES. And when planning a holiday, try to support local reserves and wildlife departments that operate sustainable tourism. And instead of paying for that photo on holiday, why not contribute to a local conservation body instead? Actions like this help give value to the places where special wild animals can stay wild. ●

Please donate at **www.ptes.org/wildlifedonate** to help keep slow lorises in the wild

Anna Nekaris is Professor of Anthropology and Primate Conservation at Oxford Brookes University. She also heads Little Fireface Project, working to save slow lorises in Java and throughout Asia.



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**

State of Nature Report

The second *State of Nature* Report was launched in September by Sir David Attenborough.

© RSPB

The first *State of Nature* alerted the public and government to the alarming rate of wildlife decline over the last 50 years. The second, published last month by more than 50 leading conservation organisations, including PTES, confirms the unprecedented rate of loss. Stark headline figures include the news that 56% of species studied have declined over the last 50 years, and that one tenth of the 8000 UK species assessed are threatened with extinction. Subsidiary reports were produced for England, Scotland, Wales and Northern Ireland, in the hope that devolved governments will step up to take some of the urgent action required. There is a strong consensus among all those involved in the report that governments, conservationists, businesses and individuals must now work together to help nature. 'Millions of people in the UK care very passionately about nature and the environment and I believe that we can work together to turn around the fortunes of wildlife,' said Sir David. However, the report makes clear there is no time to lose. PTES CEO Jill Nelson said, 'The report is a gloomy reminder of how much there is to do. But we take some heart from the exciting and innovative conservation projects that were also reported, including those where landscapes are being restored, special places defended and struggling species brought back from the brink'. ●

Pine martens breed in Wales

So far so good in an ambitious scheme to restore an important predator to part of its former range.

© Jenny McPherson

The Vincent Wildlife Trust's (VWT) ongoing project, part funded by PTES, to re-establish a thriving pine marten population in mid Wales reported a notable success this year, with the announcement that at least three of the females released last September have reared litters of kits in their new homes. The youngsters have been spotted on camera trap footage. A further 20 martens were translocated from Scotland in September to further boost the population, and VWT will be monitoring closely to see how they disperse into the surrounding landscape, which is rich in suitable marten habitat. ●

Record bat crime fine sets a precedent

Our friends at the Bat Conservation Trust have welcomed a record fine for negligence leading to damage of a roost of brown long-eared bats by building developers.

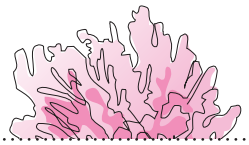
© John Altringham

This is the first time such a case has been tried in the Crown Court and in fining the Matlock developer £3000 plus £2000 costs, and making a confiscation order for £5730 under the Proceeds of Crime Act, the judge set a valuable precedent. Previously the Act has been used mainly in instances of illegal wildlife trade, but the case ensures that developers will be less inclined to try and increase their profits by skipping important wildlife protection measures. ●

Brexit – what now for UK conservation?

PTES CEO **Jill Nelson** considers the future in the wake of June's referendum result.

What Brexit will eventually mean for the conservation world remains unclear. What is clear is that it'll have a strong impact on UK environment policy, much of which emerged from the EU. The nature of our departure will affect which EU policies we lose and which we retain, but in any event the protective blanket of the Birds Directive, Habitats Directive, Water Framework Directive, Common Agricultural Policy and Common Fisheries Policy will no longer apply to us. Funding for environmental work will change, not least the £500M a year which farmers receive through agri-environment schemes, and the £35M a year that supports UK environmental NGOs through EU LIFE grants. These mechanisms haven't been perfect, but they need replacing with something at least as strong. We have a new government to direct environmental policy, for better or worse, as the framework is rebuilt. Brexit is the most significant challenge to the UK environment that the sector has ever faced. ●



Cull at any cost?

Anger grows as 'unscientific' badger cull expands in area.

© David Dohnal

A new government petition, proposed by naturalist and TV presenter Simon King gained rapid support when it was launched in August following the announcement that culling would not only continue, but expand in area. The cull has been heavily criticised by conservationists including Sir David Attenborough and Chris Packham and by scientists such as ZSL Professor Rosie Woodroffe, who worked on previous extensive trials into the impact of culling on incidences of bovine TB in cattle. Several Wildlife Trusts are backing and enacting alternative schemes to vaccinate badgers against bTB instead. PTES CEO Jill Nelson said that the position of PTES has not changed, 'We are sympathetic to farmers, but the evidence shows the cull won't work. It's a waste of money.'

Horrid news!

News to warm an arachnophile's heart from Cornwall earlier this year.

© John Walters

One of the rarest spiders in Britain, possibly the world, has been discovered at a new site. The horrid (from the Latin *horridus* meaning 'hairy') ground weaver spider was previously known historically from only three sites, all in Plymouth, and had never been photographed. One site has already been lost to development, and a second narrowly avoided becoming a housing estate in 2015, thanks largely to the likely presence of this tiny invertebrate celebrity. A Crowdfunder campaign set up by Buglife, the invertebrate conservation trust, raised £10,000 in public donations to pay for urgent survey work, with the result that an additional site was discovered.

Goodbye, Bramble Cay melomys

Man-made climate change claims its first mammalian extinction victim – but it certainly won't be the last.

© Luke Leung

The Bramble Cay melomys or mosaic-tailed rat was discovered in 1845 on the small coral island of Bramble Cay on the Great Barrier Reef. It had no other known distribution, and nowhere to go when sea level rises threatened its low-lying home. The island suffered a drastic loss of vegetation cover in recent years and following severe storms in which the island was fully inundated by seawater, officials from the Queensland Department of Environment and Heritage Protection conducted an intensive survey to confirm the species' status. Sadly, they found no sign of the rare rodent which now has the tragic distinction of being the first mammal to go extinct as a direct result of anthropogenic climate change.

DATES FOR YOUR DIARY:

26th October 2016
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!

24th November, 9th December 2016 and 20th January 2017
Starlings and 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

It never rains...

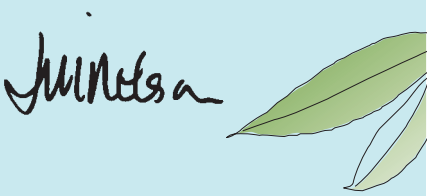
It's been a summer of turmoil in more ways than one.

Early on Friday 24th June I received two unexpected pieces of news in quick succession: the UK would be leaving the EU and the PTES offices had disappeared under water from the dramatic rainfall overnight! A degree of chaos ensued from both events and while I'm pleased to report that we're now back on dry land with the damage largely covered by insurance, Brexit may take a little longer to sort out.

Others have suffered worse, putting our upheaval firmly into perspective. In Assam, where we are supporting rhino translocations and protecting them from poaching, 19 people and several elephants were killed in excessive rain and a rhino calf had to be rescued. The disarray lead to alarming opportunities for poachers. Meanwhile, in Tanzania's Ruaha National Park, massive river flood waters hampered our lion fieldwork and in a nearby village a lady was forced to rush to higher ground to give birth in the open on a tarpaulin.

These events are a useful reminder, as if we needed it, that the impacts of climate change will be most serious where conditions are already the most challenging. Let's hope autumn and winter are a little calmer.

Thank you



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

Operation dormouse

Dormice were once common and familiar creatures in much of England and Wales, with torpid individuals often spotted by woodsmen. However, their sleepy and secretive habits lent an air of mystery, which persisted well into the 20th century, when ecologists belatedly realised the species was suffering a terrible decline. The last 30 years have seen a surge in research and an intensive conservation and monitoring effort, spearheaded by PTES. Our work to secure the future of this delightful and enigmatic rodent continues.

Rand Poppen

Where do dormice hibernate?

Leo Gubert of Exeter University is tackling this enduring mystery of dormouse ecology. Hibernation is tough and we know many dormice don't survive, so understanding their needs may prove vital in improving management of their habitat. Leo and his colleagues are using radio tracking, microclimate modelling and specially trained dogs to help their systematic search for hibernation sites. ●

Genes and dispersal

Because dormice live at low density in fragments of habitat, the gene pool for many populations is small. Inbreeding can limit the ability of a population to adapt to change, and we want to know how serious this problem might be for British dormice. **Fraser Combe** of Manchester Metropolitan University is investigating the genetic status and connectivity of dormouse populations in Essex and Suffolk. Using genetic tools, he's hoping to identify landscape features that help or hinder dormouse dispersal – information that will greatly enhance future conservation. ●

Ideal homes

What makes a good dormouse wood? It's a deceptively simple question. We know that traditional management techniques such as coppicing can help dormice, but natural differences in woodland character and in the timing and spacial pattern of activities such as coppicing create so much variation it's hard to know exactly which actions work best. We're funding two teams to try and unpick these complex interactions. **Fraser Combe** and **Ed Harris** at Manchester Metropolitan University and **Cecily Goodwin** and **Robbie MacDonald** at the University of Exeter will all be using data from the National Dormouse Monitoring Programme, along with climate and management information and GIS data detailing ecological site variables such as canopy cover, biomass, and density. ●

Working together

In September, we were proud to host another successful dormouse conference at the University of Reading. There was so much to get through that for the first time, the conference was spread over two days. The first was aimed mainly at ecological consultants and managers, and featured guest speakers from several of our European partners. Dormouse bridges and survey techniques were recurring themes. On day two, delegates included a great many of our valued volunteer monitors whose data, submitted to our National Dormouse Monitoring Programme, forms the basis of much current research. ●

Scrapbook

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

© Chris King

Beetle mania

We've had a fantastic response to this year's *Great Stag Hunt* survey, with over 6400 respondents sending in details of more than 8000 magnificent beetles, from Northamptonshire to the Isle of Wight. Thanks everyone!

© Ehsan Moqanaki

© iStockphoto.com/ Christian Riedel

Syrian bears

Ehsan Moqanaki has been in touch to update us on his work with Syrian brown bears in the Iranian Caucasus. His careful search of a 200km stretch of path in the Arasbaran Biosphere Reserve yielded over 100 bear scat samples, which molecular and genetic techniques have shown came from 31 different individuals. You can see rare camera trap footage of one of the bears online at https://goo.gl/LHOyh2

Four nifty noses!

PTES is pioneering the use of sniffer dogs in UK conservation work. It started with Tui, trained to detect harvest mice, and continues this year with Charlie Brown, who sniffs out dormice. Now, meet Zella and Dooley who both have a nose for pine marten poop!

Zella & Dooley

© John Martin

© Nick Upton / naturepl.com

Nick's a winner

Congratulations to Nick Upton, whose fabulous pictures of one of our projects recently won the documentary prize in the 2016 British Wildlife Photography Awards. The pictures included this gorgeous mouse portrait and shots of Emily Howard-Williams with sniffer dog Tui, were commissioned to accompany a *BBC Wildlife* feature by Amy-Jane Beer.

Welcome to beautiful baby Edward, a son to our Individual Giving Manager Rachel Lawrence, born on 29th June.

/PTES

Favourites from Twitter

@OfficialZSL We released 19 rare dormice into the wild as part of a #reintroduction programme with @PTES and partners. #cute

@AliDriverUK Participants in the UK Water Vole Group today. Many thanks to @PTES for hosting yet again.

Interns progress

Congratulations to three of last year's interns, Debbie Wright (above right), Ali North (top) and Rory Dimond (left), who have all made great progess in their conservation careers. Debbie is the Hedgehog Officer at Warwickshire Wildlife Trust, Ali is the Hedgehog Officer at Suffolk Wildlife Trust and Rory has joined Buglife, where he's carrying out invertebrate surveys, including for the rare horrid ground weaver spider (see *News*) and working on a new citizen science project as well as a children's book on bugs.

Meet the team

PTES is run by 17 dedicated members of staff, guided by a board of trustees.

Megan Gimber Orchard Project Officer

I've worked in science and science communication since my biology degree. There's no more interesting and rewarding area to work in, and PTES strikes the perfect balance between research, evidence-based conservation and communication. It's amazing to work with people so dedicated to saving and improving the world. Working on the Traditional Orchard Project couldn't suit me better. Growing up on a traditional orchard inspired my love for nature and gave me practical skills like grafting and cider making. I'm also a beekeeper and fascinated by the pollinator communities of orchards. I love using my experience to protect and restore these precious habitats upon which so much wildlife relies.

Lauren Bishop-Vranch Outreach Officer

After nine years in digital marketing, I returned to university to take an MSc in Conservation. My job at PTES is the first time I've been able to combine experience in digital, social and events with everything I've learned (and am still learning!) about endangered species. I manage our Facebook, Twitter and Instagram channels, as well as the main website and an outreach events programme. A big part of my job is communicating the challenges facing wildlife and the fantastic work PTES does to protect endangered species in the UK and abroad. I love helping people learn about nature and how they can help support wildlife in their own garden or local park. Meeting so many other wildlife fans online and in person makes me hopeful for the future.

A hole lot of support for 'hogs

So far this year we have sold over 800 of these snazzy Hedgehog Highway signs to homebuilders. Lazer cut from recycled plastic they will mark pathways through gardens in new developments for posterity. Buy yours at the PTES shop today!

Buy your hedgehog sign at www.ptes.org/shop

f/ptes.org

Favourites from Facebook

I've been feeding hedgehogs in my garden for two years now. I have three different feed stations and they visit every evening.
Corinna Roberts

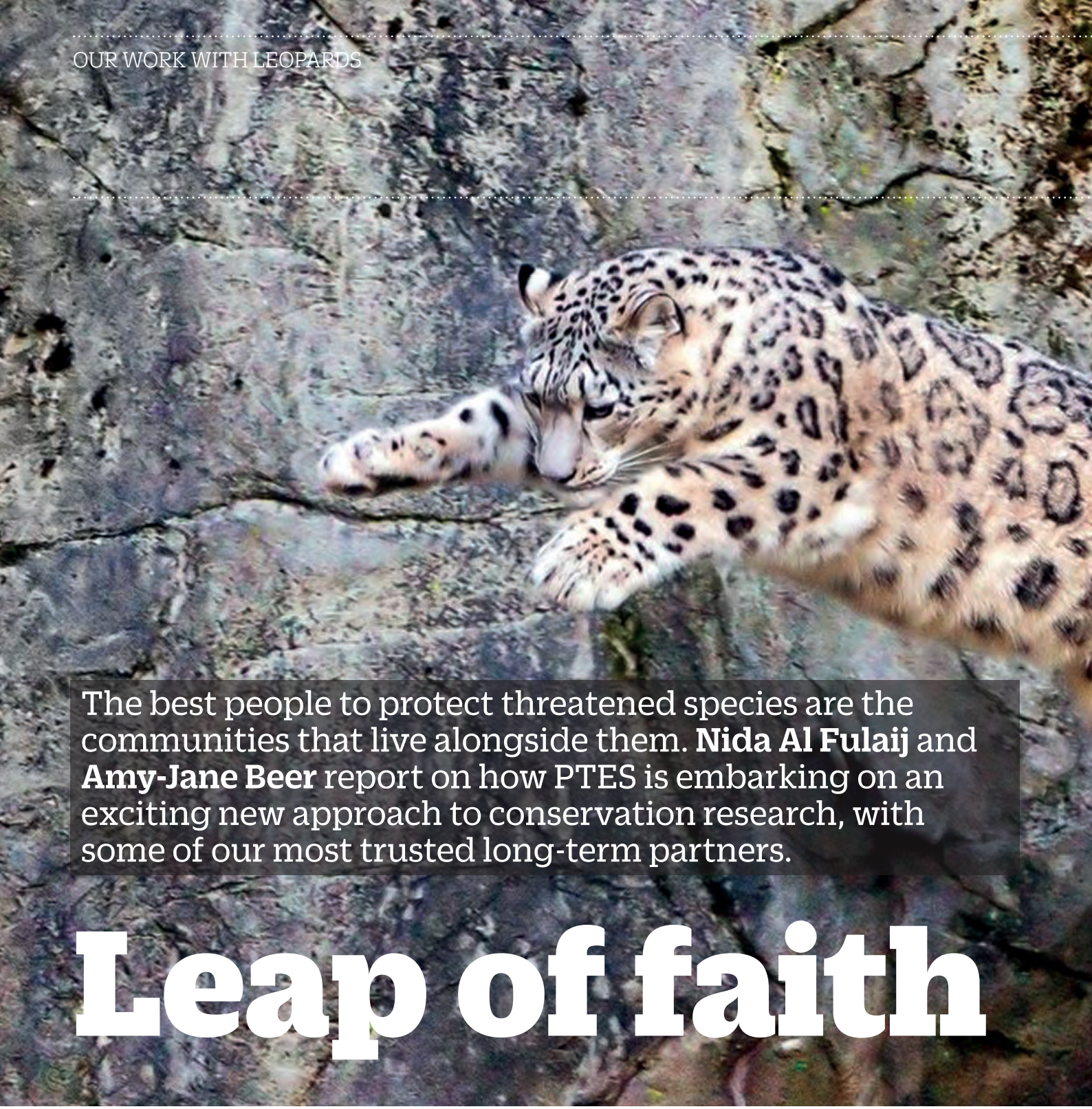
My son described it as his luckiest day ever when we found a stag beetle scuttling across our garden yesterday. We think it's a female.
Alix Abeyratne

Internships...

The next generation

Every year PTES awards internships to promising young researchers embarking on conservation careers. We're delighted to announce the recipients of the 2016 awards – congratulations to all four of them:

John Worthington Hill will be working with **Nottinghamshire Wildlife Trust** to investigate the status and recovery of **adders** in the county.
Deon Roos is studying at the **University of Aberdeen**, finding out if **water voles** engineer their habitats.
Iain Hill will be working out how to make roads safer for hedgehogs in Scotland, with the support of our friends at **Froglife.**
Laura Weir from the **Centre for Ecology and Hydrology** is investigating whether **butterflies** that grow on drought-stressed host plants are vulnerable to viral infection.



The best people to protect threatened species are the communities that live alongside them. **Nida Al Fulaij** and **Amy-Jane Beer** report on how PTES is embarking on an exciting new approach to conservation research, with some of our most trusted long-term partners.

Leap of faith

Working to protect the world's rarest and most iconic wild animals may sound like a dream job. Unfortunately it's also one of the most challenging. The main difficulty, aside from the fact that actual encounters with the species concerned are by definition often rare, is that the more obvious measures to protect species and habitats are often in direct conflict with important economic interests, such as industry, mining or farming. So understanding species ecology is not enough – conservationists must also have a firm grasp of finance in order to work out sustainable solutions that will ensure a safe environment for wildlife whilst enabling other legitimate activities to continue. Funding is a perennial problem. Although in some regions eco-tourism can bring in much-needed money, most conservation work is far from lucrative and those working in the sector spend huge amounts of time looking for ways to support their ongoing work. And all this time spent chasing down funding means less time working for the benefit of wildlife.

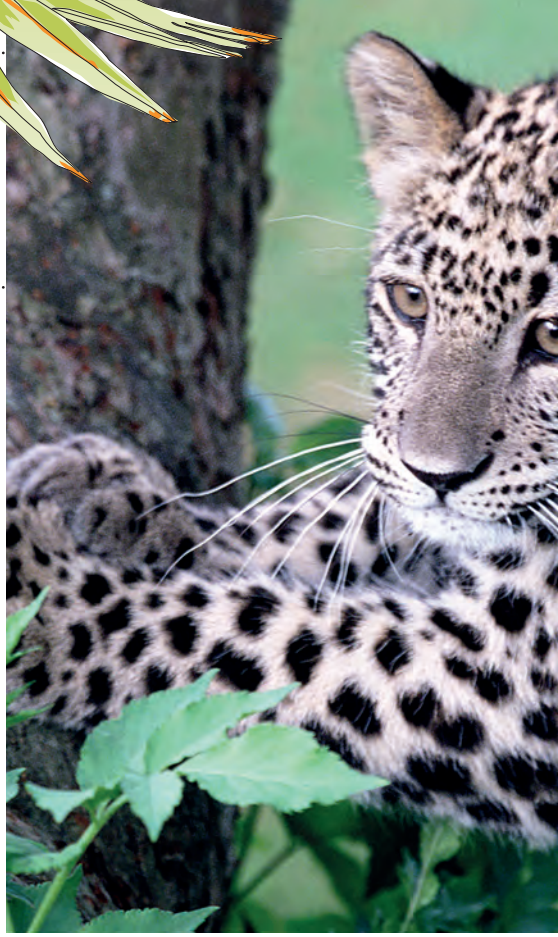
This is the situation that conservation project leaders around the world find themselves in. With your generous donations we are able to support many of them, but most of these projects are relatively short term. So we've decided to address this difficulty by creating Conservation Partnerships with some of the conservationists we know well. These longer term funding packages will support the projects and individuals whose work has already achieved really sound goals and who we know will benefit from secure funding for up to five years. We aim to have up to five such partnerships running at any one time, each of which will receive a total of £100,000 over a five-year period. With this level of funding security they will be able to plan with a new degree of certainty and security. These projects may include an aspect of ecological research but will focus

LEFT: Short, powerful legs and a flexible spine give snow leopards spectacular speed and agility on steep ground. The long tail serves as a counterbalance, and enables the cat to make reactive turns even in mid leap.

BELOW: Like all big cats, leopards are exclusive obligate carnivores, meaning they eat only meat. Their long canine teeth are adapted for precision stabbing, while the bladed cheek teeth, known as carnassials, slice as efficiently as scissors.

mainly on achieving practical conservation milestones, involving the local community and other relevant stakeholders.

Our first two Conservation Partners are Bayara Agvaantseren in Mongolia and Mohammad Farhadinia, in Iran. Both are old friends of PTES, whose work with snow leopards and Persian leopards respectively many of you will already be familiar with. We're delighted to be embarking on even closer relationships with them. They will be sending regular updates on how your critical donations are protecting these endangered leopards, each icons of their very different landscapes.



Persian perfection

Leopards are one of the world's most adaptable large carnivores, but they are in decline. The Persian subspecies is now the largest cat in western and central Asia, following the local extinction of tigers and Asiatic lions. We want to save it from the same fate.

Mohammad

Despite their ability to thrive in habitats as diverse as deserts, mountains and forests, Persian leopards are struggling. Their population is somewhere in the region of 1000 adult animals, around 65% of which live in Iran. The northern region of Kopet Dag, close to the border with Turkmenistan, is the closest they have to a stronghold, but even here, their range is shrinking. Action is urgently needed to save them. But without detailed understanding of what Persian leopards need to survive, it's almost impossible to know what to do next.

In collaboration with the University of Oxford's Wildlife Conservation Research Unit, **Mohammad Farhadinia** and his team from the Iranian Cheetah Society are working in Tandoureh National Park, in Kopet Dag. Work expanding on Mohammad's PhD research into leopard ecology is underway, but needs to be supported by community engagement and capacity building – that is, ensuring conservation efforts are appropriate to the setting and that they take place with the involvement, understanding and support of local people. Over the next five years, by engaging with communities and governments, the team will create a conservation model in the Park that will not only help leopards but also benefit other wildlife and local people. They'll address the problem of contagious diseases that affect wild and domestic animals and provide training for vets and shepherds.

Improvements in law enforcement and anti-poaching efforts to protect leopards and their prey (wild goats, boar and other small ungulates), are a priority, and the team will offer training and incentives to rangers, establishing a local network for reporting wildlife crime, and engage directly with hunters. Educational events and a documentary film will boost public support for leopard conservation. Everyone is keen to ensure leopards are considered in local and regional management plans, and national and international partnerships are being sought to improve the conservation status of the entire region. It's an ambitious set of goals, but with five years to enact his plans, we're confident Mohammad can achieve real change. ●

Every day is a snow day

Bayara

While it may seem a privilege to live alongside a wild snow leopard, it's also a challenge, especially for herding families whose livelihood is threatened when their livestock are targeted by these super furry felines.

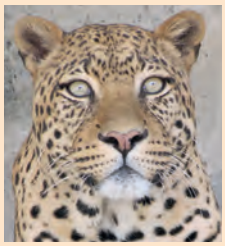
Mongolia is home to a significant proportion of the world's remaining snow leopards. Previous work by Bayara Agvaantseren of the Snow Leopard Conservation Foundation (SLCF) has focussed on the rugged, high altitude Tost landscape of the province of South Gobi. It's ideal snow leopard habitat, but under pressure from unsustainable mining practices and other forms of development. In 2010, there were 92 mining licences on land overlapping core snow leopard habitat in the area. Legal mining is vital to the Mongolian economy, but there is an urgent need to mitigate its environmental effects and to halt illegal operations. In response to concerns over mining, SLCF helped local

ABOVE: Persian leopard cubs generally grow a little larger than their African cousins. Genetic studies suggest that the Persian subspecies of this widespread cat has been separated from other lineages for several hundred thousand years.

BELOW: Snow leopards are stealthy predators, and unguarded livestock are at serious risk. Where several animals are corralled in an enclosed space a leopard may kill more than one, increasing the cost to the herder and the anger that leads some to carry out retaliatory killings. Fewer than 7500 snow leopards remain in the wild.

© Jeannette Katzir Photog / Shutterstock.com

Fact files



(SUB)SPECIES NAME
Panthera pardalis ciccaucasia

COMMON NAME
Persian leopard

DISTINGUISHING FEATURES
Lithe and powerful big cat, with long legs and tail. Coat is pale gold to tawny, with black spots, grouped in rosettes on flanks.

HABITS
Solitary except mother with cubs. Mainly nocturnal, climbs and jumps well, often uses trees. Hunts small- to medium-sized hoofed mammals, rabbits and rodents. Communicates with hoarse grunts, huffs and roars.

LIFE HISTORY
Litters of 1–6 (usually 2 or 3) born in spring after 90–105 day gestation; weaned at 3 months, mature at 3 years. May live 20 years or more in the wild.

HABITAT & DISTRIBUTION
Forests and mountainous areas of the eastern Causcasus, the majority in northern Iran.

CONSERVATION STATUS
Listed as Endangered by IUCN and on CITES Appendix I

SPECIES NAME
Panthera uncia

COMMON NAME
Snow leopard

DISTINGUISHING FEATURES
Long-bodied big cat with relatively short legs and a very long tail. Fur thick, pale grey with darker spots and rosettes.

HABITS
Solitary, except mother with cubs. Active mainly around dusk and dawn (crepuscular). Spectacularly agile, able to leap 6m vertically and 15m horizontally. Hunts wild and domestic prey, also takes carrion. Huffs and growls, but cannot roar.

LIFE HISTORY
Litters of 1–5 (usually 2 or 3) cubs born in spring after 90–103 day gestation; weaned at 2–3 months, mature at 2 years, may live up to 21 years in the wild.

HABITAT & DISTRIBUTION
Rocky and grassy montane slopes above 2700m altitude in the Himalayas and mountainous parts of central Asia.

CONSERVATION STATUS
Listed as Endangered by IUCN and on CITES Appendix I

people gain Local Protected Area (LPA) status for a large part of the Tost Mountains adjoining the Gobi Gurvansaikhan National Park. And it's here that the new Conservation Partnership funding we have allocated will be spent between now and 2020. By the end of that time, Bayara and her colleagues aim to have established an exemplary model of community-managed snow leopard conservation. Tost will be the first wildlife sanctuary in Mongolia dedicated to snow leopard conservation. Critically, there will be no active mining licences in core snow leopard areas. The LPA will have an active steering committee and a clear management plan, which will be fully integrated with that of the neighbouring National Park. PTES funds will support two full time rangers and a corps of community volunteer rangers, and the development of a protocol for effectively monitoring and patrolling the LPA.

Bayara and her team plan to fit out an underused local community centre with solar power into an information centre to support conservation in Tost. From here, the team will launch at least three national media campaigns focussing public attention on snow leopard conservation. The intention is for the Tost township to become a hub of information about snow leopard conservation, and for the project to start a movement towards establishing snow leopards as a symbol of national pride and identity in Mongolia. ●

Blooming busy!

Steve Oram and Megan Gimber are on a mission to save one of the UK's most endangered and biodiverse habitats, the traditional orchard. Their efforts have borne fruit. A new fruit variety locator called FruitFinder and an online orchard tool kit offer owners expert advice and information on restoration. We're also mapping the encouraging number of community orchards appearing across the country.

RIGHT: Megan demonstrates how easy it is to graft new trees using the bud grafting method in one of our online orchard video guides.

LEFT: Simply type in your postcode to our new community orchard map to find an orchard you can enjoy in your neighbourhood. With around 500 mapped already, you might be surprised how close your nearest one is.

Over several years, PTES has created digital records of where traditional orchards remain and assessed their condition. Too many were found to be in decline. Orchard owners told us they needed help to improve the vitality of their orchards for all the species that depend upon them and we set about creating an online resource to do just that.

Our webpages needed a thorough reworking: so we pruned out the deadwood and allowed it to grow in an entirely new direction. www.ptes.org/orchards is now brimming with practical guides to wildlife-sensitive orchard management. You'll find how to manage, plant and nurture orchards, and can watch practical instruction videos on how and when to prune or how to bud- or bench-graft new trees.

The Orchard Network is a national (British Isles) multi-organisation traditional orchard steering group. We've brought it in-house and given it an extensive revamp. This is where you can find local orchard groups and services, extensive advice on how to deal with the legal side of habitat protection within the planning system and ways to influence land use in your area, and our unique community orchard map. You'll also find details of all the relevant events coming up.

FruitFinder

Similar in function to the RHS Plant Finder, but venturing into areas where Plant Finder fears to tread, FruitFinder contains information on thousands of varieties of fruit grown in the British Isles, with links to nurseries and collections where they can be sourced. It will be useful for anyone wishing to plant a new orchard, gap up an old one, or just pick a single interesting variety for a back garden. You can search by fruit type, local provenance or use, or simply by name. Behind FruitFinder is a huge database, extensively researched and compiled by the orchard team, and a map of locations where the variety is known to be growing. Many varieties are unavailable from nurseries, so FruitFinder will link you to collections where plant material can be sourced for grafting your own trees.

Heritage collections

Hand in hand with FruitFinder is a drive to locate and catalogue existing heritage

Please turn to the enclosed donation form to contribute – your gifts to PTES will help us ensure a future for traditional orchards and the species that depend on them.

collections and, where there are gaps, create new ones. We're working with The National Trust at Scotney Castle to create a new Kent 'mother orchard'. As you'd imagine, cherries feature heavily in Kent and we plan to propagate and plant 27 varieties along with 85 types of apple, nine plums, five pears, and the Farleigh damson. We've also recently completed the relocation of the National Collection of Cider Apples from Tidnor in Herefordshire to eight county-themed cider orchards at National Trust properties around the southwest.

Community orchards and events

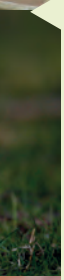
As traditional orchards can't offer the financial returns of a modern intensive orchard (which incidentally, are almost entirely lacking in biodiversity), we recognise that a key element of their preservation is keeping them in active use. We're delighted by the burgeoning trend in community orchards. These are organically managed, contain proper full-sized trees and offer free public access to freshly picked fruit. Apple Day celebrations are increasingly popular too and there's a growing interest in cider production. We've created a map of all the community orchards we know about, which you can search by postcode. To find your nearest one, or discover how to set one up, visit www.ptes.org/community-orchards. And what would a community orchard be without events? Search listings of Apple Days and training courses close to you at www.ptes.org/orchard-events.

Grants for fruit trees

The data we've collected during a decade of orchard work shows a dramatic decline in habitat area, around 90% since the 1950s. But it has also helped us understand where to direct conservation efforts. Almost half of the remaining traditional orchards are in a 'declining' condition for wildlife. Most of these could be brought into a 'favourable' condition by planting new trees, as this ensures continuity and resilience of habitat, and could potentially mean the orchard survives into the 22nd century. We launched our first ever orchard grant scheme to help orchard owners, schools and community orchard groups plant new trees or graft their own with free grafting kits. So far around 1400 new traditional orchard trees have been planted around the UK. If all of these live into late maturity (around 80 years), that's 112,000 tree-years, a lot of apples, and an awful lot of precious habitat.

Species that specialise in orchards

Fieldfares *Turdus pilaris* and redwings *Turdus iliacus*
These winter visitors can sometimes be seen together. Numbers migrating from Scandinavia and further east are higher in years when fruit-set in hedgerows is poor or winter conditions are harsh.



Apple lacebug *Physatocheila smreczynskii*
A very scarce lacebug, currently distributed only in southern England. It is often found grazing not on apple trees themselves, but on the lichens that grow on them.

Little owl *Athene noctua*
A naturalised bird rather than a true native, the little owl has a large natural range in Western Europe from Latvia right through to African Mauritania. It has found an ideal ecological niche in the traditionally managed orchards of the UK. It is often predated by barn owls.

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

BARBARY MACAQUES

© Barbary Macaque Awareness and Conservation

North Africa's only native monkey is threatened by habitat loss and illegal trade. We're funding Barbary Macaque Awareness and Conservation to extend their successful public education programme to six Moroccan cities where exploitation is most severe.

BORNEAN ORANGUTANS

© Orangutan Foundation

More than 85% of these endangered apes live in forests with no formal protection, vast areas of which are being logged or cleared for palm oil production. We're helping the Orangutan Foundation advise and increase numbers of forest managers so they can better understand these precious populations.

INDIAN ELEPHANTS

© DD Bangla News

The increasing elephant population of West Bengal is in conflict with people. Human and elephant lives are being lost and crops and homes destroyed. Samya Basu is working to map elephant movements and migration routes and identify areas where conflict is most severe so that action can be taken.

Doing what they do best

Amanda Vincent and **Steven Tyler** of Project Seahorse have previously made great use of PTES funds in improving the status of threatened seahorses around the world. We're helping them continue the good work in Vietnam.

Seahorses were once common animals around most Southeast Asian coasts, but have declined severely in recent decades. The latest survey data suggests that numbers are holding up better within Marine Protected Areas, which is encouraging, but the declines elsewhere are dreadful.

A major problem for these charismatic little fish is overexploitation for the aquarium and traditional medicine trades. Vietnam is a major contributor to the global seahorse market, with perhaps as many as one million individuals of seven different species exported each year. All seahorse species are listed on CITES Appendix II, which requires that any trade must not damage their conservation status in the wild. However the lack of basic information on seahorse populations makes it very difficult for national authorities to know what impact the exploitation is having and take appropriate action. It's doubly difficult in Vietnam where most seahorses entering the trade are taken as bycatch – fisherman treat them as a bonus, but because they are not targeted deliberately, catches are very difficult to regulate.

Work carried out by Vietnamese nationals will generate new knowledge of seahorse biology, fisheries and trade and this will be shared with the Vietnamese authorities, who have requested Project Seahorse's help in monitoring and managing their precious stocks.

endangered

Seahorses are very weak swimmers and have to rely on features such as reefs and seaweed beds for cover.

© Project Seahorse

Pygmy three-toed sloths

These critically endangered creatures are only found on one tiny Carribbean island. Panamanian conservationist **Diorene Smith** is championing their cause with support from PTES and the Zoological Society of London.

The endemic pygmy sloth population of Escudo de Veraguas has declined to around a hundred individuals. The island is sparsely inhabited by people but local fishermen cut the mangroves for charcoal and timber and large scale ecotourism threatens the very animals visitors come to see .

Diorene has built up a great relationship with the indigenous people and is also working closely with local NGOs and the Panamanian authorities to improve the situation, starting by developing a long-term monitoring technique that will help her understand how the sloths are responding to their changing conditions. Diorene has also been searching the largely unexplored tropical forests and swamps of the island's interior, in the hope of finding more sloth areas, and tracking future population trends. She recently fitted five sloths with GPS collars, hoping to track their movements. Three of the collars fell off, suggesting the technique needs some refinement, but the tags were recovered and can be used again. The other two collared animals were tracked inland suggesting that there may be more good sloth habitat to be discovered.

Diorene has run a number of educational workshops for local fishing folk to improve their understanding of the nature and the threats to the sloths from hunting and overuse of mangroves. And she has successfully gained the support of Ministry rangers who take action when she reports any illegal activity.

GPS-collared pygmy sloths are giving PTES researchers new insights into individual ranging behaviour and the habitat preferences of this highly vulnerable species.

© ZSL

Where do anteaters cross the road?

The giant anteaters of Brazil's great grasslands are impressive animals, but no match for a speeding car. **Arnaud Desbiez** is assessing the impact of fragmentation and road traffic accidents involving this vulnerable species.

The *Cerrado* of Brazil was once a vast savannah. Now over half has been converted to pasture or arable land and what's left is fragmented by roads. This is bad news for giant anteaters, which are frequently killed or fatally injured in traffic collisions.

Whether the population can withstand current losses or if the roads act as barriers to free movement and ultimately gene flow is unknown. Arnaud is working with the Royal Zoological Society of Scotland to monitor anteater casualties along *Cerrado* roads and predict the intensity of losses in different areas. He's also using GPS collars to survey anteaters on either side of the highway to investigate the barrier effect of the roads. Structured interviews with highway authorities and truck driver associations are raising awareness and recruiting help in minimising collisions.

Arnaud and his team are mapping giant anteater crossing points and collisions so that black spots can be signposted and the terrible losses reduced. ●

Giant anteaters breed slowly, rearing one young at a time, so losses on roads are likely to impact seriously on the viability of populations. If the roads also act as barriers to movement, their impact may be very severe, as anteaters need a large home range to survive.

© Dr Arnaud Desbiez

Rays of hope for threatened mantas

How better species identification will help enforce trade laws.

Manta and devil (or mobula) rays are excellent indicators of healthy oceans and generate ecotourism income in many developing countries. Sadly both are threatened by unsustainable fishing for gill plates, used in traditional medicines.

Manta rays are CITES listed, so trade in their parts should be closely regulated. But the two species look so similar that manta parts can quite easily be passed off as unprotected devil rays. As long as devil rays can be fished legally, protection is very difficult to enforce.

With our help, **Jane Hosegood** of Bangor University is working with The Manta Trust and the Royal Zoological Society of Scotland to develop genetic techniques for differentiating the species and their body parts. This hard evidence will support proposals to also list devil rays under CITES. The genetic material collected will also be used to investigate how different rays adapt to environmental conditions, thus helping to focus local conservation efforts more effectively.

© The Manta Trust

Dolphins in distress

We're saving a unique population of river dolphins by seeking protection for their habitat.

The river dolphins of the Mahakam River in Indonesia are a variety of Irrawaddy river dolphin, known locally as *pesut*. Fewer than 90 remain, confined to a 100km section of river, mainly in confluences where tributaries meet and it's safest to feed and play. This tiny population is threatened by declining fish abundance as spawning swamps are converted into oil palm plantations and by increasing river traffic. Coal barges in particular are a collision hazard and cause severe underwater noise pollution which upsets dolphin movement patterns. And barge traffic is set to increase five-fold by 2017.

Danielle Kreb of the Rare Aquatic Species Association of Indonesia is building a scientific case for formal protection of the area. Local people are supportive because they want sustainable fish stocks back. Danielle is using passive acoustic devices to record *pesut* movement, behaviour and disturbance. Her evidence will be vital in halting further destruction in this special place. ●

© Danielle Kreb

Concern for Cornish bee

Work by PTES intern **Rory Dimond** suggests the large scabious bee is only just hanging on in parts of its Cornish range.

The large scabious bee is a solitary bee largely reliant on the pollen of field scabious flowers. They are threatened across their range because of the decline of wildflower-rich grassland. Rory has been working with Buglife, the Invertebrate Conservation Trust, to find out how the species is faring in Cornwall.

Rory has recorded bee sightings, mapped potential foraging areas and assessed the connectivity of habitat in the north of the county. On the plus side, he identified a new but isolated stronghold area on Kelsey Head SSSI. Worryingly however, a previously recorded population at nearby Pendale Dunes SSSI seems to have disappeared, possibly as a result of changes to grassland management.

The maps Rory have created are being used to identify where best to create and restore wildflower-rich habitat, and indicate where more sensitive land management is required. ●

© Rory Dimond

© Creative Nature.nl / Shutterstock.com

Harvest mice in Warwickshire

When PTES intern **Debbie Wright** set out to map what was thought to be the highly restricted range of harvest mice in Warwickshire, she was in for a very welcome surprise.

Before my project began in autumn 2015, there were records of harvest mice in only ten locations in Warwickshire for the past decade. With so little known about their whereabouts in the county, it was hard to make any plans to help conserve them. The project I undertook with the Warwickshire Wildlife Trust aimed to increase our knowledge to inform future habitat management.

I began surveying sites with potentially suitable habitat for evidence of harvest mice. My survey methods included the setting of humane live traps, searching vegetation for their distinctive woven nests and collecting owl pellets for analysis. I was amazed when I began to find evidence of harvest mice at every site, covering a range of habitats from wetland, to grassland and farmland. It seemed the tiny mice might be far more widespread and adaptable than we first thought. So long as the landscape is connected, and there is sufficient habitat to sustain populations, harvest mice should be able to move about and colonize new areas fairly rapidly.

The project has been a success in more ways than one. Not only were we able to put harvest mice on the map across Warwickshire, we also generated lots of interest. Local environmental groups, organisations, councils, colleges and individuals all got involved with the surveying, and enthusiastic volunteers were trained in new techniques. Workshops, talks, articles and social media were used throughout the project to raise public awareness of our smallest British rodent.

The experience has been very valuable to me personally – I've learned such a lot, and have been able to use the internship as a stepping stone into a fully fledged conservation role. ●

© Debbie Wright

Donate online at www.ptes.org/wildlifedonate to help harvest mice

Monitoring hedgehogs at the Dragon School

Hedgehog Officer **Henry Johnson** reports on recruiting a new generation of hedgehog enthusiasts in Oxford.

Oxford, with it's famous ancient buildings and leafy suburbs, is full of potentially great hedgehog habitat, and home to leading hedgehog enthusiast, author and ecologist Hugh Warwick. But here as elsewhere, we fear hedgehogs are declining, so we were delighted to be invited to the city's Dragon School to launch a monitoring effort on campus. After touring the site with the Estates Bursar and science teacher Sue Ormerod, Henry, Hugh and Nadia Weber of the Felix Byam Shaw Foundation demonstrated the use of footprint tunnels and explained the science behind detecting and monitoring a range of elusive mammals. The pupils will now take the lead in baiting the tunnels and collecting hedgehog distribution data on their patch. Their project will feed into the Foundation's wider work, attempting to link gardens across a large area and using footprint tracking tunnels deployed by undergraduates to monitor the effects. The project is a very welcome contribution to the *Hedgehog Street* campaign, now in its sixth year, cofunded by PTES and the British Hedgehog Preservation Society.

Find out more
www.hedgehogstreet.org

Signals of success

When **Connor Wood** began a PTES internship working on the ecology of invasive American signal crayfish in northern Scotland, he met challenges and rewards in equal measure.

The spread of invasive American signal crayfish is a serious threat to its white-clawed native counterpart. Something needs to be done, but previous research suggests that simply removing large numbers of signal crayfish from our waterways doesn't work. Indeed, some previously attempted trapping methods attract mostly males, and efforts to target females produced the unfortunate result of increasing reproductive output, making the problem worse. The issue of sex ratios needed looking at more closely, and PTES awarded Connor an internship grant in 2015 to do just that.

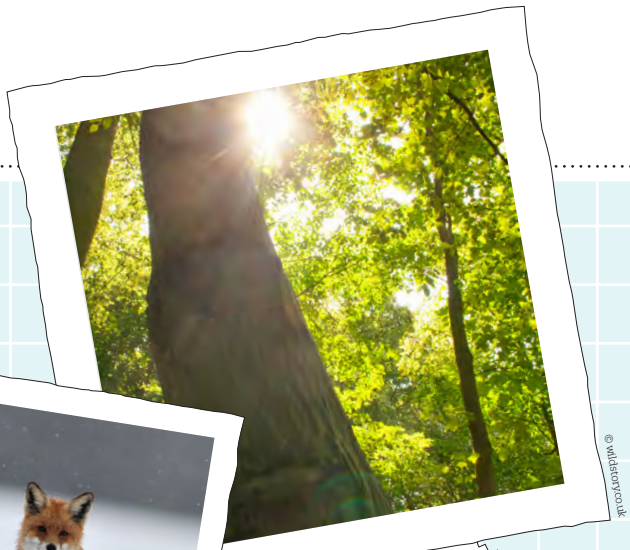
Connor and his colleague, Rupert Houghton began by designing and building cage traps. This proved a challenge. 'We had no experience in design or construction, and each giant cage had to be hand built from bamboo and netting.' But with trial and error they succeeded and in fact the cages worked brilliantly, with zero escapees and only three mortalities, which can reasonably be assumed to be natural. A total of 3,531 crayfish were captured and the results confirmed that sites where animals were removed tended to exhibit a rapid shift in the sex ratio, which must be taken into account in future control efforts.

Another challenge was the sheer physicality of the task. 'I've never worked so hard!' says Connor. 'Early starts were followed by up to 12 hours of trekking up and down river banks, hauling out traps and counting crayfish. It was exhausting for a couple of scrawny guys like us. But I've acquired new team working and leadership skills, and discovered perseverance I didn't know I had. Oh, and I learned the valuable lesson that if you're going to be camping in the Highlands, you need to spend more than £30 on a tent!'

Connor produced a scientific poster about his work and presented it at the Findhorn, Nairn & Lossie River Festival. 'It was great fun, but more importantly, having the chance to communicate complex scientific ideas to the public in a digestible manner allowed me to develop another invaluable skill. The internship has been a truly remarkable and rewarding experience – I recommend anyone starting out on their conservation career path to consider it.'

The Insider's Guide to... Nature writing

Our Insider is **Dr Amy-Jane Beer**, author, editor of *Wildlife World* and regular contributor to *BBC Wildlife* and other magazines.



© wildstory.co.uk

© Erik Mandre / Shutterstock.com

Whoever said 'a picture paints a thousand words' wasn't choosing their words very carefully.

What and why?

Whatever your reasons for wanting to write about nature, be they professional or amateur, scientific or poetic, there is both art and technique to doing it well. Like any craft, writing takes practice. Writing creatively on any subject means taking your time over each idea, each sentence, each word, and finding a way to say what you really mean. Writing about nature, much like drawing it, is a wonderful way of honing your powers of observation, and thus it's something every aspiring naturalist should try.

Most writers start by reading other authors and emulating their favourites on the way to establishing a style of their own. There are relatively few rules that can never be broken, as long as you do so carefully. At its best, nature writing is a powerful means of communicating ideas and information, of generating understanding or support, driving change, and perhaps above all, sharing the love. And Nature needs a lot more of that.

1 – Choosing your subject

One of the most quoted pieces of advice for any kind of writing is to 'write what you know'. While this is true for nature writing, it doesn't mean you have to be an expert. Perhaps a better rule would be 'write from experience' – even if your experience is amateur or full of uncertainty. A piece exploring your own journey of discovery will be far more engaging than something that tries to sound expert and authoritative. It can be very liberating to embrace your ignorance (I do this a lot), as it takes away the fear of asking what might feel like silly questions. There's no such thing as a naturalist that knows it all. Also, there is no need to write about exotic species if that's not your experience. You might love tigers on TV, or even have glimpsed a bit of one on a tour in India once. But a florid account of their general magnificence is unlikely to ring true. A piece about how it felt to *not* see the animal you were desperate to find might be more convincing but ultimately unsatisfying. You might write far more movingly about a tree you walk past every day that developers want to cut down. Trust that the authenticity of your experince will show.

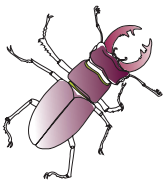
If you're trying to find your style, compare those of other writers. For example do you prefer the word-artistry of Robert Macfarlane, the earthiness of Mark Cocker, the emotional chokehold of Helen Macdonald, the everyday breeziness of Melissa Harrision, or the love and rage of Chris Packham?

© wildstory.co.uk

2 – Find your voice

Establishing who your readers are is a first priority in deciding how to write. I use a different voice if I'm writing for professional biologists than I would for a general readership, and of course another one for children, just as I would in 'real life'. But unless you're going for fiction (and there's nothing wrong with that), I'd avoid trying to be someone you're not. A sort of exception is formal scientific writing, where tradition dictates that authors take themselves out of the picture completely by using the passive voice, for example 'The meadow was surveyed annually'. This tends to sound aloof and a bit stuffy, and many journals now accept an active first person voice: 'We/I surveyed the meadow annually'. For almost any other nature writing, if you're describing your own experience, an active voice is more engaging.

Think about the level of language that's appropriate for your audience. I don't believe in dumbing down, but nor am I a fan of needlessly technical writing. It's amazing how few simple words are needed to explain a complex idea if you really understand the subject. Of course you may want the reader to be confident you know what you're talking about, but it's easy to slip into a



lecturing or bossy tone, which can be offputting. Jargon is certainly no indicator of superior understanding – often the opposite in fact – and why would you want to alienate your reader by making them feel ignorant? By far the most impressive science writers are those whose text flows from eye to brain with no noticeable effort on the part of the reader. Of course this doesn't mean you have to use the obvious words. In nature writing it's perfectly OK to use language creatively or even unexpectedly. But use the highfalutin stuff sparingly, be aware of when you're doing it, and make sure you have a good reason.

3 – Show, don't tell

This is a golden rule of creative writing, and it means giving credit to the reader's imagination. You don't have to spell out every nuance. For example, instead of 'I walked into a deciduous woodland on a windy day in mid September,' I might say 'The roar of branches intensified as I left the open ground and stepped into a confetti of early leaf fall.' I haven't mentioned woodland, deciduous trees, the date or the weather, but all are apparent to the reader. Showing rather than telling helps put the reader in your shoes, so they encounter things as you did, and draw their own conclusions from the experience. You are guiding them, but not leading them by the nose.

4 – Recognise your bad habits

Every writer has words they use far more often than necessary. For me, it's 'rather'. It sneaks in all over the place and almost invariably I find myself editing it out. Other common traps include over-describing, over-dramatising, and resorting to clichés.

5 – Read aloud

This is a simple way to unmask multiple issues with your writing. You should be able to read and breathe comfortably. If not, your punctuation has gone awry. If the rhythm is monotonous it could be because your sentences are all of a similar length. Try mixing up longer and shorter ones. You may also stumble over unintentional alliterations, where two or more consecutive words begin with the same letter. This can be acceptable and quite effective if it's done for deliberate effect, but it can also sound clumsy, so use advisedly. Another potential problem you might avoid this way is an unintended change in tone, for example from friendly and engaging to lecturing and superior or even ranty. Again, any of these tones might be appropriate in a given piece, but only if the effect is intended. It's easy to be overbearing when the subject is close to your heart, and when you most want the reader to stay with you to the end. ●

My first cover story – don't I look pleased?

© wildstory.co.uk

Pitfall checklist

When you think you're finished, go back over your work a few times and try to catch yourself out.

Have you been over-descriptive? Count the adjectives in each sentence or passage and see if you can reduce them. You might not need some at all. Some paired adjectives could be condensed into a single word that does the job (for example a long-eared bat has 'large, comical-looking ears'. But using 'outlandish ears' is both more concise and more entertaining.

Spot the clichés. There's usually a better, more original way to say what you mean.

Check the first words of each sentence – are there some you use repeatedly? Change them, especially if they appear in consecutive sentences.

Have you repeated the same word in any one sentence? Consider changing it, unless it's there for deliberate effect.

Be aware of sentence fragments, which lack both a subject and a verb. For example, 'I rose early. Too early, really.' The second sentence is a fragment. It works here because of the conversational style, but fragments can be problematic in conventional prose. By all means use them for deliberate effect but don't make a habit of it.

Are you sure of your facts? Check them again, remembering Wikipedia is fallible.

Use a spellchecker, and triple check the spelling of names, both those of people you might offend and of species, especially if you're using scientific binomials.

Have you broken any golden rules? If not, why not? Doing so for deliberate effect can be effective, but don't over do it.

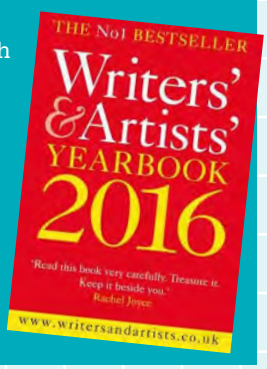
The bumpy road to publication

If seeing your work in print is not your goal, you'll probably enjoy relatively angst-free writing. For most established and aspiring writers however, publishability is a consideration. If you're thinking of writing for money, just remember there's a good reason most nature writers have other jobs such as teaching, editing, lecturing, tour guiding or media work.

Nature writing is one of the fastest growing genres in UK publishing and there are plenty of outlets, increasingly online. Blogging is a great way to get your work out there, though you'll also need to build a social media profile to direct readers to it. Local magazines and newspapers, and charity publications are often keen for copy, especially if you offer it for nothing.

Approaching a book publisher cold is usually a thankless task. The annual *Writers and Artists Yearbook* tells you which publishers are accepting submissions in a given genre, and provides submission guidelines. Don't waste your energy by trying to circumvent these.

You may well have a great book inside you. But start small, and try a few different styles and techniques. Learn the craft. Many universities and colleges offer short and part-time courses in creative writing, or you might join a local writers group. This is a great way to begin sharing your work and to learn from others. ●



© James A. Moore

Pine martens once thrived in the ancient wildwoods that covered most of Britain. But habitat loss and intensive persecution meant that by 1915 numbers had crashed and just a few isolated populations remained, almost all of them in Scotland.

It took almost a century for this agile and elusive carnivore to make a comeback. PTES is one of the major funders of the Vincent Wildlife Trust initiative to return pine martens to the wooded valleys of central Wales. From here, we hope they will spread out across the region and possibly over the border into England.

Your support is vital.

Thank you.

people's trust for endangered species