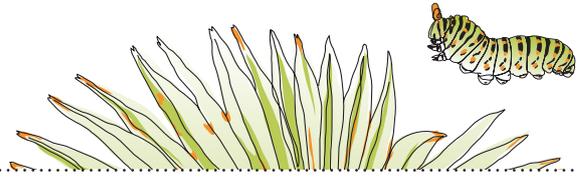


Wildlife World

AUTUMN 2020
ISSUE 18

people's
trust for
endangered
species



UK

Stag beetles

Pine martens

Scotland's wildcats

The hidden lives of hedgehogs

ISSN 2049-8268

Scale of the issue

How Covid-19 has renewed demands to end the trade in pangolins and other species

Overseas

Tracking turtles

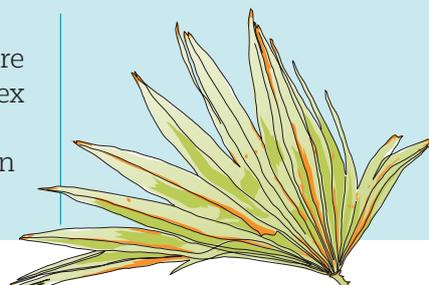
Mongolia's snow leopards

Cambodia's rare crocodiles

Saving the Sumatran elephant

Telling the world

How scientists in Brazil are using the sad story of Alex the giant armadillo to spread their conservation message.

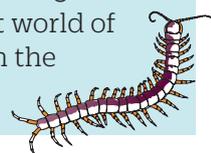


Wild school

An education programme is teaching rural children in India how to live alongside leopards and tigers.

Baby news

The offspring that are giving us new insights into the secret world of slow lorises on the island of Java.



A close-up photograph of a purple flower, possibly a foxglove, with a stag beetle perched on its petal. The background is a soft, out-of-focus green and yellow, suggesting a natural outdoor setting. The beetle's legs and wings are visible, and its body is dark brown with lighter markings.

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

STAG BEETLES

If you were one of the thousands of people who reported seeing a stag beetle this summer, thank you. These amazing creatures used to be a common sight, especially in the south of England, but sadly they're declining everywhere and have even gone extinct in some European countries.

We're determined not to let that happen here, and that's why we organised our stag weekend in June – knowing where the beetles are helps us to plan conservation policies. Thanks to everyone who took part.



Welcome

Summer may not have panned out exactly as anticipated as lockdown meandered on, but despite the depressing backdrop, at PTES we've managed to find light amid the gloom.

If there was ever a time to embrace social media, this was it. With unflagging enthusiasm, our team regularly shared our news, provided advice and inspired our followers to stay optimistic for wildlife.

It's been really rewarding receiving so many lovely comments and messages of support. And I shall be forever grateful to everyone who has managed to provide financial support at whatever level over the last six months. It's been such a vote of confidence in us – thank you.

Some of our conservation work stopped or had to be carried out in new ways, but some of our projects were boosted during lockdown – we received a record number of sightings through our *Living with Mammals* survey, the *Great Stag Hunt* and the *Big Hedgehog Map*.

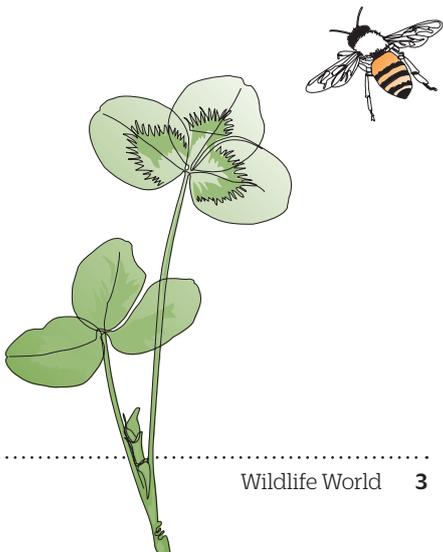
Meanwhile, dormouse monitors donned masks and gloves to check nest boxes and water vole volunteers are venturing out again. It's possible that we'll never do some things again. But rest assured we'll be doing lots more, just differently and better.

Thank you and take care.

Jill Nelson



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



In this edition

- 04 **PTES People** profiles Dylan Allman, who took advantage of being out of school for the summer to become a champion for his local hedgehogs.
- 05 One aspect of wildlife conservation often overlooked is communication, but in **Frontline** we hear about a PTES scientist who is making sure the world hears his stories.
- 06 In **Conservation News** this issue, why pine martens could help red squirrels and a new plan to save Scottish wildcats.
- 08 This issue's **Species Focus** is on Cambodian crocodiles, so rare they were believed to be extinct just 20 years ago. Thanks in part to PTES funding, this croc's star is now on the rise.
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- 22 **Thanks to you** – how your support and generous donations are helping conservationists carry out work on species such as mountain hares and snow leopards.

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The pandemic has been terrible for people, but **Dylan Allman** used his spare time to find out hedgehogs are in trouble too – and what he could do to help them.

When schools closed due to Covid-19, I found myself spending more time in our garden, and that led me to discover hedgehogs were living there. I was curious to find out why, and so began an exciting and fascinating journey to becoming a local hedgehog champion.

The hedgehogs had made a nest of twigs and leaves in a wild and messy part of the garden – it turned out the long grass, brambles and nettles were a perfect habitat for them. Great news for a species in serious decline.

I soon realised there was more I could do to help the hedgehogs not just survive, but thrive. I set up a feeding station, built a log-pile, put in a small wildlife pond with escape ramps and installed night-vision trail cameras so I could see what was going on. The results were amazing.

Soon, we had several adult hogs visiting, and we've had hoglets too! I've learnt so much and now I want to share my discoveries so others can help too.

I've found most people aren't aware of our hedgehogs' plight or that doing simple things, such as putting out a shallow dish of water and making a gap in the fence for them to pass through, can make a huge difference. I made a film – *The Wonderful World of Hedgehogs* – which is one of the most-watched videos on the Hedgehog Street YouTube channel!

I'm hoping when things are back to normal, I can offer talks to local organisations. I'm also working on a campaign to reduce the number of injuries suffered by hedgehogs from strimmers and mowers. There's so much we can, and should, do to protect these beautiful creatures. Watch this space! ●

 **Watch Dylan's video**
www.youtube.com/user/HedgehogStreet
 PTES runs Hedgehog Street with the British Hedgehog Preservation Society

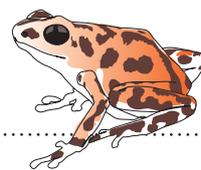
“

The hedgehogs made a nest of twigs and leaves in a messy part of the garden – long grass, brambles and nettles are perfect habitat for them.

”

STOP PRESS

Dylan's film has just won Best Narrative Film (documentary) in his age category in the Film and TV School Wales, Schools and Colleges Awards 2020. Well done Dylan!



Saving wildlife is about stories as well as science

Conservationists increasingly need to explain to everyone, from local people to politicians, why and how rare species need protection. The tale of Alex the armadillo is a perfect example of how to go about this, says **James Fair**.

Alex may have been a perfectly ordinary armadillo, but he was also the first baby giant armadillo ever to be caught on camera after a team, headed by conservation biologist **Arnaud Desbiez**, used a remote camera to film him as he emerged with his mother from a burrow.

The black and white footage (I recommend this short film: www.pbs.org/wgbh/nova/video/alex-giant-armadillo-ambassador/) shows a bumbling, ghostly pale, alien creature being tended to by an almost equally strange mother.

Arnaud – well known to PTES because we help to fund his work on giant anteaters – knew it was wildlife gold. He shared the short video with TV stations and websites, and then gave regular updates on Alex's progress. 'I remember telling people when he predated his first termite mound and dug his first burrow – it was like celebrating a child's first birthday,' Arnaud recalls.

An animal that most Brazilians barely knew existed became a star. But then Alex disappeared down an old burrow and never re-emerged. When Arnaud and his team retrieved his body, they found he'd died from a wound inflicted by a puma.

They were devastated – Alex's life had given them a rare insight into giant armadillos, but they also mourned his loss because they had come to know him so well. And yet, even after he died, Alex continued to play his part because his story was so emotionally compelling.

Wildlife conservation isn't simply a matter of finding out what a species requires for its survival or stopping illegal hunting or persecution. An equally important role for any conservationist is to explain to local people, the broader general public and politicians why a species such as the giant armadillo is important.

It may even be the most crucial part of their job, because unless society buys into a conservation goal, the scientist may be wasting their time. Alex's story was a reminder of how fragile these animals are, Arnaud says. But publicising their work to the public doesn't come naturally to conservation biologists, he admits – universities teach them that publishing scientific papers and communicating with their peers is their most important function.

When it comes to engaging with the media, Arnaud knows it's most important to make contact with Brazilian journalists because it is Brazilian wildlife he protects. He also makes a conscious effort not just to inform local people about the work they are doing but to

understand the issues they face in their daily lives.

He recalls a landowner who initially declined them permission to survey for giant anteaters on his estate. Arnaud arranged to go round for 'five minutes' and ended up talking to him for two hours. Eventually, the landowner changed his mind. 'I think I got him through sheer exhaustion,' Arnaud says.

'Later, when we found a giant anteater, he got very excited. Now, he was proud about the work that was happening on his land, and one day, he put up a huge outdoor sign saying, 'Protection of wildlife is our business.' So, working at a grassroots level is also an important part of what we do.'

Many other PTES-funded

scientists also make considerable efforts to talk about the work they do in the mainstream press, and projects we're involved with such as *Hedgehog Street* and the *Great Stag Hunt* both have communication of science to non-scientists at their heart.

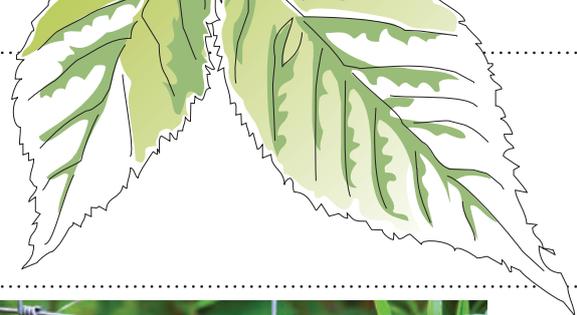
And it's why we make sure you, our loyal supporters, are also kept up-to-date, through *Wildlife World* and our website, about all the projects we fund. Do let us know if and how we can do this better! ●



'I remember telling people when Alex predated his first termite mound and dug his first burrow – it was like celebrating a child's first birthday.'



James Fair is a journalist specialising in wildlife conservation stories and editor of *Wildlife World Magazine*.



It's hard to stay gloomy for long when there's so much fascinating and ground-breaking research that PTES funds, giving hope for the future of species such as pine martens and wildcats.

Even more of you monitoring mammals in your garden

If you were one of the 1,100 people who took part in our *Living with Mammals* survey then we've got good news – you can get involved again right now.



© Michael Nungate / Shutterstock.com

For the first time, we're running a second phase and it carries on until the end of November. During the spring survey, our trusty citizen scientists (thank you!) recorded some 11,000 sightings and signs, the highest since *Living with Mammals* began 18 years ago, with hedgehogs, squirrels (both grey and red), foxes, bats and badgers most commonly seen. People from Dorset to Denbighshire in Wales took part.

Living with Mammals requires you to spend time each week looking for mammals (or signs such as footprints and droppings) in your garden or local green space. By comparing results from the surveys over a period of time, we can get an idea of whether wild mammal populations are increasing or decreasing, and that gives us a better chance to implement strategies for their conservation. ●

[Find out more and report your sightings](http://www.ptes.org/LwM)
www.ptes.org/LwM

Why pine martens are good news for our native squirrels

New study shows that woodland carnivore predated more on grey than red squirrels.



© Mark Medcal / Shutterstock.com



© Mark Cairn / Shutterstock.com

Research funded by PTES has shown why mainland Britain needs to see pine martens – agile, arboreal relatives of stoats, weasels and badgers – back across larger parts of the country.

Scientists at **Queen's University Belfast** have demonstrated that pine martens prey on non-native grey squirrels significantly more than our native reds, suggesting these small carnivores could play a role in keeping greys at bay.

PTES grants manager Nida Al-Fulaij said the research was a 'ray of hope' for pine martens because it shows how they help to re-balance woodland ecosystems. 'They are desperately in need of our help, but this is a very positive step forward in our understanding of this species, which will ultimately help us to conserve them in the long term,' she said. ●

[Find out more](http://www.ptes.org/grants/internship-projects/pine-martens-red-squirrels/)
www.ptes.org/grants/internship-projects/pine-martens-red-squirrels/

Cull of the wild

Ramping up of controversial badger culls will result in the deaths of an estimated 70,000 individuals by the end of 2020, conservationists say.



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Sad news from the badger culling front. After promising earlier this year that it would move away from a policy of lethal control to one of vaccination, this autumn the Government authorised a huge increase in the programme that will see an estimated 70,000 badgers shot by the end of 2020.

Even badgers that have been vaccinated will not be spared, and culling will expand into new areas in England such as Derbyshire, Oxfordshire, Leicestershire and Lincolnshire. According to The Wildlife Trusts, this will bring the total number of badgers killed since culling began in 2013 to 170,000, an estimated 35 per cent of the UK badger population.

Conservationists argue that killing badgers will not significantly reduce levels of bovine tuberculosis in cattle, since the vast majority of cases are as a result of cattle-to-cattle transmission. ●

Hope for the Highland tiger

A new initiative will breed Scottish wildcats, which are increasingly scarce, to release into the wild and remove the threats that face them there.



© Neville Brack

We're proud to be part of a new European partnership project which is aiming to prevent the extinction of wildcats in Scotland. This small but fierce carnivore is the only native cat left in the UK – European lynx went extinct more than 1,000 years ago. But they're under threat, numbering just a few hundred individuals and they are only found in the Scottish Highlands.

Saving Wildcats is an ambitious project, led by the **Royal Zoological Society of Scotland**, that will remove threats facing the cats in the wild, breed a captive population and release enough animals to boost numbers in the wild. Wildcats may not have the majesty of lions or tigers but they're our only wild feline and they need all the help we can give. ●

Swim, turtle, swim

The huge distances covered by turtles in the Caribbean underlines the need for more joined-up conservation.



© Peter Richardson

Why did the green turtle cross the Caribbean? Well, we're not quite sure, but at least we now know that it did thanks to a revealing study, by a group of international scientists, that PTES helped to fund. The turtle in question was one of 16 fitted with a satellite transmitter tag on its shell after being caught within a Marine Protected Area (MPA) of the Turks and Caicos Islands.

While some of the turtles travelled within the territory of the islands, or made the relatively short hop west to Cuba, this determined reptile swam nearly 1,500km (900 miles) to the northern coast of Colombia, passing through the territorial waters of eight Caribbean countries in the process. Other turtles ended up in Nicaragua, Venezuela and on the south-east coast of the USA.

The scientists – from the **Marine Conservation Society and the University of Exeter in the UK**, and the Turks and Caicos

Department of Environment and Coastal Resources – say the research demonstrates not only the importance of MPAs but also the need for collaboration by nations across the Caribbean region if turtle conservation efforts are to be effective. ●

Whitley winners

The prestigious Whitley Awards 2020 have recognised three talented conservationist with links to PTES.



We are delighted that two of our project leaders have been recognised for their dedication by receiving a Whitley Fund for Nature award. Our funds have been supporting **Ali Hussein's** (above) efforts protecting the world's most endangered antelope, the hirola, and giraffes for several years, and now we will fund his zebra work, too (see below). Also honoured was **Jeanne Tarrant** for her work on amphibians and reptiles in South Africa – PTES funds conservation of Albany adders (more on page 21).

Finally, we were thrilled to hear that one of our past project leaders, **Gabriela Rezende**, was recognised for her critical work on black lion tamarins in Brazil. ●

PTES funding for rare zebras

Despite their scarcity, Grevy's zebras have been largely ignored by conservationists – until now.



© Nicola K. Johnson / Shutterstock

This year we had to suspend our grant-giving programme due to the huge uncertainties caused by Covid-19. Now we're delighted to report that we've just provided funds for a new project being run by our friend Ali Hussein in Kenya.

Grevy's zebras, endemic to the Horn of Africa, are the most threatened of the three zebra species, with just 2,500 adults left in the wild. Though one isolated remnant population is still found in Garissa, where Ali works, it has been left off the IUCN red list. This omission puts them at risk of going extinct. Now Ali and his team aim to map their fragmented populations in eastern Kenya and change the future prospects for this little-known species. ●





Cambodian crocodiles rise from the dead

At the beginning of the 21st century, Siamese crocodiles were believed to be extinct in the wild. Then, in 2000, a team from **Fauna & Flora International (FFI)** discovered wild individuals living in the Cardamom Mountains in western Cambodia. The population was tiny, however, so for the past two decades, FFI – in partnership with other groups through the **Cambodian Crocodile Conservation Programme (CCCP)** and with funding from PTES and others – has been working hard to increase numbers by protecting these rare reptiles in situ as well as reintroducing new ones from captive-breeding. Today, there are believed to be about 250 in the wild, but the species is still classified as Critically Endangered on the IUCN Red List.

Croc care



From captive-breeding to ranger patrols and radio-tracking, local conservationists have all bases covered.

With the help of funding support from PTES, one of the key conservation actions has been captive-breeding and reintroductions into the wild. In total, since 2012, 111 crocodiles have been released into various sites in the Cardamom Mountains. Breeding is carried out at a rescue centre outside Phnom Penh. A further 10 reintroductions are planned for December, pending DNA tests to ensure the individuals are pure-bred (some captive-bred crocodiles are hybrids). Captive-breeding is not easy: two females produced nests at the centre in 2019, but only one contained fertilised eggs.

Anti-poaching patrols

It's also important to protect wild crocodiles, of course. The CCCP now employs 31 wardens to monitor five separate sites. Poaching was previously a major problem, but thanks to wardens patrolling for a combined total of 272 days and covering more than 3,000km, no illegal activity was reported between July 2018 and June 2019. Wardens also assist with trying to prevent illegal encroachment into the Veal Veng crocodile sanctuary.

Nest discoveries

Monitoring the crocodiles and regular surveys to assess overall populations is vital. For example, in June of this year, a female crocodile – who was released two years earlier – was found guarding a nest of 10 eggs in the Chat Reap sanctuary. The eggs subsequently proved to be infertile, perhaps indicating there had been no male available. It showed that released animals are adapting well to conditions, as well as the need for more reinforcements if they are to reproduce successfully in the wild.

Radio-tracking

Another part of the programme includes tracking four radio-tagged crocodiles, which presents considerable difficulties in the challenging terrain of the Cardamom Mountains. In time, it's hoped the next phase will include moving to satellite transmitters, which will allow for the gathering of more accurate and frequent data on the crocodiles' movements. ●

Young Cambodian crocodiles are released into the wilds of the Cardamom Mountains from enclosures – more than 100 have been reintroduced this way since 2012.



Scrapbook



We love hearing from PTES people, whether 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!

Morale-boosting messages

We've received some lovely, thoughtful messages over the phone, on social media and on email from our supporters over the last few months. They've boosted our morale and really encouraged us to carry on. Thank you to everyone who took the time to contact us (pictured above, before social distancing was necessary).



Date with hedgehogs

We loved hearing from Years One and Two at **Date Valley School Trust**, Surrey, who've been learning about endangered species during lockdown. They decided to focus close to home and raise awareness about the sad decline of hedgehogs. The pupils wanted to know how they can help hedgehogs and sent us lots of lovely posters. We liked Yuluf's advice to look out for hedgehogs when you're driving. Thank you to all the children who took part.

Dear PTES,

Gorgan cave newts are one of the rarest amphibians in the world. They live in Shir-Abad Cave, within a beautiful forested region in Iran. The cave's beauty is attracting evermore tourists, threatening the newts' existence.

We've printed some leaflets, to let visitors to the cave know that they must be careful not to disturb the newts. And I'm still looking for new habitats and, hopefully, new populations. Thank you for your support.

Best regards

Saeed Hosseini

A staggering amount

A huge thank you to one of our youngest fundraisers! Eugene, aged seven and a half, was given a school project during lockdown to write a book about endangered species. Rather than just writing, he decided he wanted to 'actually do something' and set himself a target to raise £30 for us. Anyone who donated over £3 received one of his original artworks, featuring endangered species. Eugene quickly smashed his target and went on to raise a staggering £178.12. We asked Eugene to paint us a special picture too and, after taking a really good look at our website, he decided on a stag beetle. We love it. Eugene, you are an inspiration!





Record sales

Shop Manager, Jackie Holton, and her daughter Grace, did a great job making our charity shop in Egham, Surrey, as safe as possible for customers to return in July. It's challenging, especially dealing with kind donations that have to be stored for a while before we can sort through them, but it's generally going really well. In fact, one week we had record sales, which is quite amazing! Thanks to Jackie, Grace and all our volunteers and loyal customers.

A day in the office* with...

Arun Dhanjal
Database Officer



As the database officer, I'm the nerd who does things such as logging all donations on our database, checking it is clean and tidy and making sure people like yourself receive this very magazine! I've been at PTES for just over a year now, and it is one of the most engaging and enthusiastic places to work because everyone here cares so deeply about wildlife. Being in this team is a privilege, and I'm incredibly grateful to be part of something bigger than myself because PTES does such good work.

I come from a scientific and musical background. I graduated with a degree in neuroscience from King's College London, and then went on to work at King's in their fundraising department. I have since gained a lot of experience in analysing and managing data, doing all that glorious behind-the-scenes work which helps charities run. Being one of the legs which helps to prop up PTES is something I really cherish.

In my spare time, I play and produce music, and during lockdown, I have been working on a piece of music for the BBC exploring the public's experiences of isolation during these life changing times. I hope *Isolation: In Your Own Words* will have shared insights we can all recognise. And I hope that you, the readers, are keeping safe and well, and thank you for your continued support. Onwards!

*currently at home!



Arun enjoys playing and producing music in his spare time



Saeed with his leaflets, fresh off the printing press!

Gorgan cave newt



Welcome baby Samin

Congratulations to Mohammad, our Conservation Partner working on Persian leopards, and his wife who are delighted to welcome baby Samin into the world.



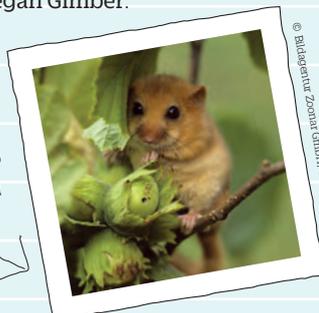
Top tips for fruitful hedges

-  Most shrubs only flower and fruit on second-year wood, so cut every 2 or 3 years for more fruit.
-  Berries peak in August and September but can persist for months. Leave hedge cutting to give wildlife a chance to make the most of them.
-  The more plant species in a hedge, the better! They will fruit at different times, giving a larger window of food abundance.

A good year for the sloes

From what we've seen, it's shaping up to be a great year for hedgerow fruit. Hedges have groaned under the weight of blackberries, elderberries and damsons, with blackthorn sloes coming along – a real treasure for the mammals, birds and insects that rely on this food to prepare for winter. But some hedges are better larders than others, so we've included some top tips for more fruitful hedgerows from our expert, Megan Gimber.

Hedgerows provide haws, blackberries and hazelnuts for species such as hazel dormice.



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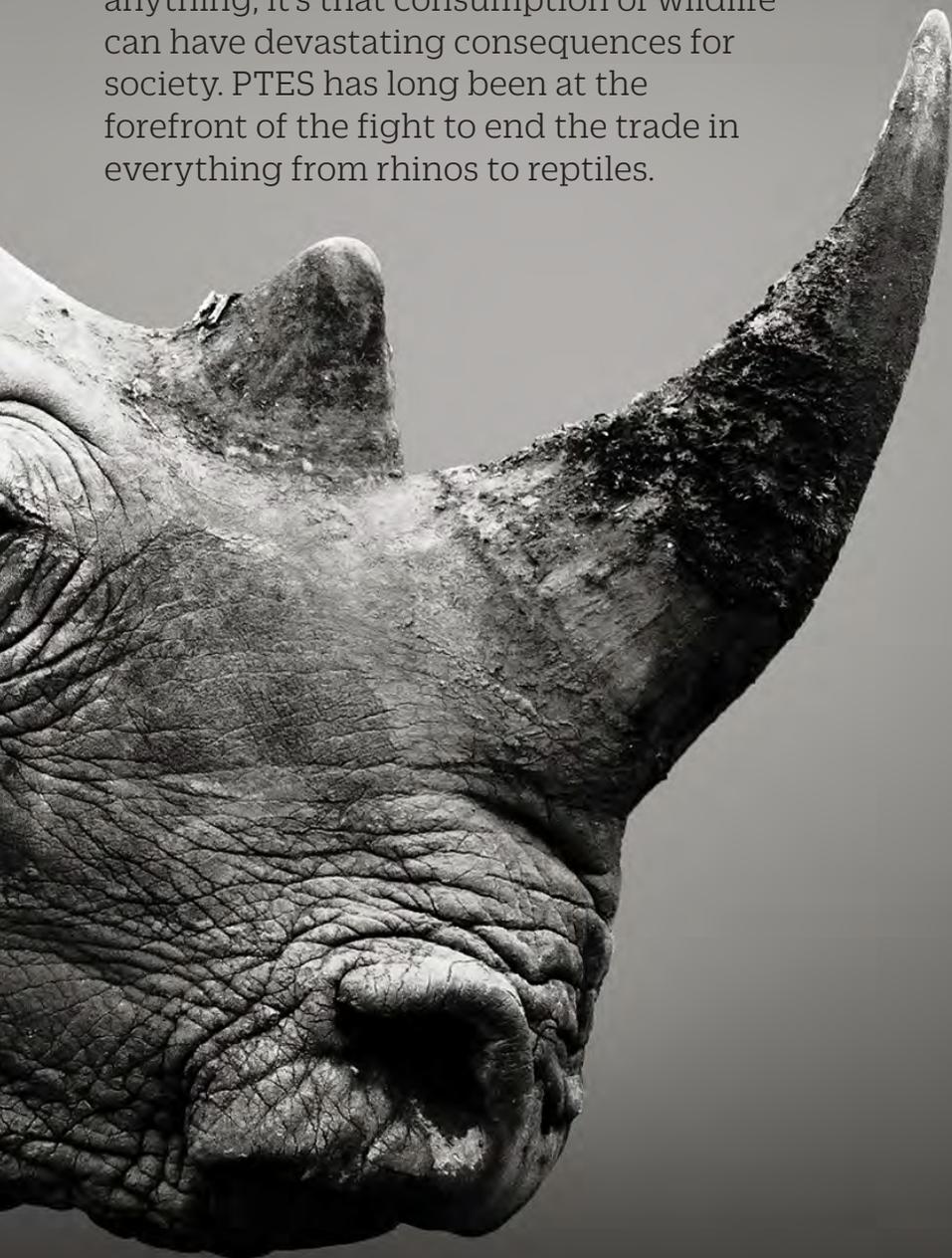




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Trade wars

If the Covid pandemic has taught us anything, it's that consumption of wildlife can have devastating consequences for society. PTES has long been at the forefront of the fight to end the trade in everything from rhinos to reptiles.



Since the Covid-19 pandemic struck at the beginning of 2020, the multi-billion pound global trade in wildlife has come under intense scrutiny. It quickly became clear that this new coronavirus, like others before it, had passed to us from animals, and it's since been established that horseshoe bats, of which there are numerous species in China, are the hosts.

The theory that it was transmitted to humans via an intermediate animal – pangolins were initially suspected – has since been discounted, but conservation scientists warn that our continued exploitation of wildlife and natural habitats could lead to other dangerous pathogens jumping the species barrier and causing pandemics of a similar scale – or worse.

Research published this year in the journal *Nature*, for example, found that populations of animals such as bats and rats carrying so-called zoonotic diseases are up to 2.5 times greater in degraded environments.

This renewed focus on the diseases harboured by wild animals could be good news for many species that are killed for food, for the (often dubious) medicinal benefits of their body parts or those that are taken alive for the pet trade. PTES is one of 11 leading conservation and animal protection groups that has called on Britain to persuade other governments to put in place a global ban on the wildlife trade, and to end the importing and exporting of wild animals into and out of the UK.

But the harmful impact of the trade has been known for many years, and PTES has long supported conservation work that tries to reduce or even eliminate often illegal commerce in threatened wildlife. Below we provide details on some of the projects we help to fund, and explain how scientists are hoping to make a difference.

RHINOCEROSES

The impact on rhinoceroses of the illegal trade in their horns – for traditional Chinese medicines, even though there's no evidence that it has any clinical affect – is well-documented. An estimated 9,000 have been poached in Africa since 2008.

Less well-known is the work taking place in the main consumer countries of China and Vietnam to reduce demand for rhino horn, regarded as the most critical action to reduce or stop the killing. If there's no market for horn in Asia, then the incentives to poach rhinos will be eliminated. ▶

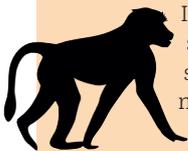
Covid-19 isn't the first disease to jump from wildlife to humans. There are currently about 260 known animal viruses that infect us, but research published in 2018 estimated there could be up to 800,000 unknown ones out there.

Prior to this pandemic, the most high-profile one to emerge this century was Severe Acute Respiratory Syndrome (SARS), in China in 2002. Caused by a very similar coronavirus, it's believed humans became infected after eating (or preparing) meat from masked palm civets, small carnivores closely related to genets, which had originally caught it from horseshoe bats. Trade in civets was subsequently banned in China.



The highly infectious Ebola disease was first identified in the Democratic Republic of Congo and what is now South Sudan in 1976. There have been numerous outbreaks since then, including a major one between 2014 and 2016 in which 11,000 people died.

It can pass to humans from species often hunted for food, such as great apes and monkeys, which in turn appear to catch it from fruit bats.



HIV, the virus that causes AIDS, first passed to humans probably from chimpanzees or gorillas, as long ago as the 1920s or even the 1800s in Africa. As with Ebola, this probably happened when animals that had been killed for their meat were being butchered.



The Spanish flu pandemic of 1918, which killed an estimated 50 million people, is believed to have come from birds; bubonic plague (or the Black Death) is a

bacterial disease carried by rats and even cats; and Lyme disease is another bacterial disease passed to humans by ticks.



That's why PTES is funding Dr Vu Hoai Nam Dang, University of Copenhagen, to investigate why demand reduction campaigns have so far failed to reduce horn consumption and what would or could in fact work.

Nam says the problem with most campaigns is that they fail to target the people who actually use horn – mostly middle-aged or elderly, wealthy people working for the government, in the private sector or in the underground economy such as illegal betting.

'The use of rhino horn is deeply rooted in Vietnamese traditions and is seen as acceptable behaviour in society,' he says. 'It's used for both health-related and status-projecting purposes, but it's difficult to separate one from the other.'

People who use horn, he adds, don't trust campaigns that use celebrities such as David Beckham and Prince William to put over the message that rhino horn has no impact. 'Legal sanctions are high but enforcement is low. No users have been prosecuted for rhino horn, only traders,' he adds.

There are three ways in which the issue could be addressed, Nam believes. One might be to provide alternatives to horn for medicinal issues, but this probably wouldn't work for a number of reasons, not least that in China, horn is also used to make artefacts.

The second solution could be a legal, regulated market, but this requires more research into rhino farming and consumer demand (and isn't regarded as a viable option by most conservation groups). The

'The use of rhino horn is deeply rooted in Vietnamese traditions and is seen as acceptable behaviour in society'

third option is better law enforcement. 'Current legal sanctions in Vietnam are considered window-dressing,' he says.

MANTA AND MOBULA RAYS

The giant oceanic manta ray, a huge beast that can grow to a width of 7m and weigh up to 3,000kg, is the best known of the group of rays known as mobulids. All mobulids are increasingly in demand for their gill plates, body parts that filter planktonic food from the water, which is how these animals feed. The plates are made into health tonics in Chinese medicine to treat a variety of ailments.

Dr Emily Humble is a conservation geneticist from the University of Edinburgh, and her work involves using DNA sequencing to identify body parts from different mobulid species.

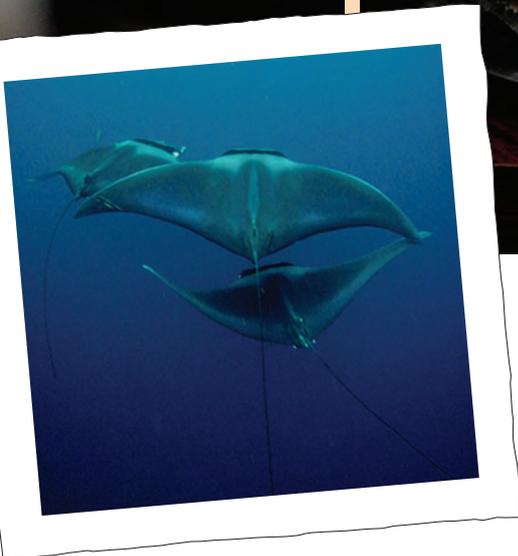
'When we started this project back in 2014, only two mobulid species were listed by the Convention on International Trade in Endangered Species (CITES), and therefore there was a real need to be able to make that distinction in order to determine whether

SEAHORSES

Trying to make the trade in wildlife sustainable can be just as important as stopping it. In Vietnam, millions of seahorses are caught every year primarily for use in traditional medicines.

There's nothing necessarily intrinsically wrong with this – all communities around the world should be able to use their local natural resources in a sustainable way. In this case, however, a few years ago it was becoming increasingly clear the trade was having a detrimental impact on populations of one species, the spotted seahorse *Hippocampus kuda*. As a result, it was placed on Appendix I of CITES, resulting in a ban on all trade.

Six other seahorse species can still be caught and sold. Project Seahorse, previously supported by PTES funding, is now helping the Vietnamese authorities to move the entire fishery towards being sustainable. Researchers are particularly looking at how the size of the fishery has changed over time and what the catch rates of different fishing gears are.



trade was legal or not,' she says.

In 2016, all mobulids were placed on CITES Appendix II, meaning there's now less of a requirement from a legal perspective to distinguish between the species. However, Emily explains, it's important to know what the impact of the trade in gill plates is having on different species and different populations.

'Diagnostic DNA 'markers' with the power to discriminate between populations could be used for determining the geographic origin of devil ray products,' Emily says. 'This information will help us understand the impact of fisheries on individual populations and identify regions that may be routinely supplying the gill plate trade.'

SUNGAZER LIZARDS

With their extraordinary, spiky scales, sungazer lizards, which are only found in the so-called highveld grasslands of two provinces in north-eastern South Africa, are as close to resembling mythical dragons as any reptile in existence. Except perhaps in size – not including the tail, they're less than 20cm long.

It's no doubt for their attractive appearance that sungazers are in high demand in the pet trade, but because it's very hard – if not impossible – to breed them in captivity, they have to be taken from the wild (which is illegal under CITES regulations). The greatest demand for them comes from Germany, Japan, the USA and UK.

They are slow breeders in the wild, producing only one or two offspring every two years, so taking them from the wild is hugely detrimental.

By far the biggest threat to the species, according to Dr Ian Little of the **Endangered Wildlife Trust (EWT)**, is habitat destruction. 'Sungazers have carved out a unique niche for themselves which puts them directly in the way of human agricultural expansion and mining, especially coal mining,' Little says.

Indeed, they specifically require open grasslands to dig their burrows (something else which makes them special – few other lizards in the world do this), and these are the areas that farmers use to grow crops such as maize and sunflowers.

PTES funded the EWT to manage a grassland conservation programme whereby private landowners can declare their properties as protected areas. Little and his colleagues are also reducing off-take from the wild, shutting down illegal trade routes and closing the loopholes in what he describes as 'a really ineffective permit process'.

Despite that, Little believes sungazers are still being traded in fairly high numbers on the black market. 'A consignment on its

way out of the country was intercepted a few weeks ago,' he says. 'The reality is that the demand will not go away as long as importing countries are still supporting it.'

SLOW LORISES

Slow lorises – small, nocturnal primates found in South-east Asia and related to other small primates such as pottos and galagos – are threatened – like sungazer lizards – by being taken from the wild for the pet trade.

For a number of years, PTES has funded the **Little Fireface Project** to establish how to give individuals rescued from captivity the best chance of survival when returned to the wild. See pages 16-17 for more about this work. ●



Conservation Partnerships

Using our extensive knowledge of where effective conservation work is taking place, we selected five partners to receive £100,000 each over a five-year period, funding that helps them ensure a future for some of our most endangered species. Meet our partners and find out how your money has helped them make a difference.

Slow lorises, Java

Anna Nekaris, Little Project Fireface

While Anna's been in the UK most of this year, her team are still based at their Java field station. Their community programmes have slowed down due to Covid-19, so the team members have shifted their focus to keeping track of the ever-growing families of slow lorises.

There are now eight adult females in the study area and, incredibly, seven of them have given birth or become pregnant in the last six months. Anna has been tracking Tereh since 2011, and this spring she gave birth to a girl – her ninth baby (that we know about).

We asked our supporters on our social media pages to chose a name for Tereh's

newest arrival. We're pleased to announce that her name, picked by one of our loyal supporters, is Tendai. Thanks to everyone who sent us a suggestion.

Tereh, along with Xena and Lupak, is one of three females who's given birth to the project's first known fourth-generation babies. Each one helps Anna and her team learn more about the ecology of these amazing animals.

When a new baby is born, for example, the older offspring must leave home and establish their own territory. Some of the youngsters don't find this easy. Indomi, one of the juveniles, has left home and come back three times.

Unfortunately, on her most recent trip she was electrocuted on a power cable during her explorations. Thankfully, she survived, which is very unusual. The team is keeping a close eye on her, and say her wounds are healing well.

In contrast to Indomi, Ophelia – another juvenile – has travelled 5km away, moving up the mountain into a forested area. Solo, a young male, has been facing his own challenges. He's had his eye on Tereh, who gave birth to her ninth baby this year. She's at least 10 years older than him but has been very patient with his advances. As we don't know who the father of Tendai is, his persistence may have paid off... ●



Giant otters, Peru

Adi Barocas, Giant Otter Conservation Project

Since April, a travel ban has prevented Adi from travelling back to Peru to continue his work with giant otters in Manu National Park.

During May and July, Adi and his team were due to paddle through the oxbow lakes and carry out their annual surveys, collecting information on the giant otter families living in them.

The team also works with local communities, some of whom are indigenous and therefore more at risk from the Covid-19 pandemic. It's important to keep these local communities as safe as possible.

One of the greatest threats facing the giant otters in the region is the suspected build-up of mercury levels in fish as a consequence of small-scale gold mining.

As of August 2020, it's unclear whether the coronavirus lockdown has precipitated an increase or decrease in gold-mining in Peru, and whether the otters and other wild animals living in the oxbow lakes of Manu have had some relief from the side effects of gold mining. ●



Lupak is one of three females to have given birth to fourth-generation babies.

Snow leopards, Mongolia

Bayarjargal (Bayara) Agvaantseren

Snow Leopard Conservation Foundation



Like most of the world, Mongolia has been under restrictions due to Covid-19. Bayara's team had spent many months unable to get out into the field, so were working from home.

The team is lucky that they work with many volunteer rangers from the communities in Tost, and they were able to continue their motorbike patrols safely within the reserve. Data for the first six months of 2020 show that seven rangers covered a staggering 5,247km.

In total they spent 540 hours in the field, collecting wildlife sightings and looking for evidence of illegal activity. Luckily they saw nothing untoward, and instead discovered 10 snow leopard signs.

They also found carcasses of ibex and argali (a mountain sheep) – most likely killed by snow leopards or wolves.

The community programmes have continued to run during the pandemic. Women have been making handicrafts, and our local coordinators were able to collect the crafts for shipment back to the programme's headquarters in Ulaanbaatar.

Local insurance coordinators have also been able to investigate claims for livestock lost to snow leopard and wolf attacks, and collect information for

processing reimbursements. These programmes provide herders with sustainable incomes and incentives for conservation, and are more important than ever as families struggle with other Covid-related hardships. ●



© Bayara Agvaantseren

Lions, Tanzania

Amy Dickman, Ruaha

Carnivore Project



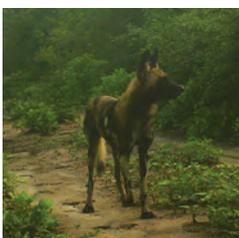
Amy's colleague Ana, who's been based in Tanzania throughout the lockdown, has been telling us about the work they've continued to do.

Throughout spring, they had really heavy rains which damaged roads, bridges and really impacted the communities living in the region. Luckily, by July, the rains subsided and the team was busy getting back to work as quickly as they could.

They were able to get out into the community villages and collect the camera traps to see what wildlife had been moving about in the area. Each animal is worth a different number of 'points' to the village for every photo. The rarest and most dangerous species are

worth the most. The cameras are now safely back in the field collecting more images and, meanwhile, Amy's team has distributed the benefits to those villages with the most points.

We're also really proud that, during this difficult time, the Lion Defenders and Conflict Officers have continued to work across 15 villages. They've been preventing conflict with carnivores and collecting information where any attacks on livestock have taken place. ●



© Ruaha Large Carnivore Project

LEFT: Many different species were captured on the remote cameras, including kudu (top) and African hunting dogs (below).

Persian leopards, Iran

Mohammad Farhadinia,

Future4Leopards



In the mountains of Iran, Mohammad and his team's main focus this year has been to improve the anti-poaching units to strengthen protection for the Persian leopards that live there. The best way to ensure that teams can move quickly and easily through the rugged mountain ranges is for the rangers to be on horseback, so they've now got horse-riding anti-poaching units in three reserves.

Each team of two to three rangers travels together for safety and moves across the nature reserves for longer periods, essential to deter poachers. It's so important that the rangers have been able to maintain their presence over the past few months.

But, like the rest of us, they've been using video conferencing to stay in touch, and have run three online workshops, attended by 300 rangers and conservationists from all over Iran. This critical training is helping inform those working to protect wildlife on how best to deal with human-leopard conflict. ●



© Future4Leopards



Discovering the hidden lives of hedgehogs

Hedgehogs are a distinctive and well-loved creature in the UK, but sadly few of us have actually seen one in the wild. Their dramatic declines in recent decades have meant they are not the regular garden visitor they once were.

While we know much about hedgehogs thanks to dedicated research, there's much we're yet to learn about these prickly garden visitors. This summer, Hedgehog Street, run by PTES in partnership with the **British Hedgehog Preservation Society**, set out to discover the hidden lives of hedgehogs.

A brand new project, *Hedgehogs After Dark*, allowed Hedgehog Champions to log different behaviours they observed in their gardens, which are becoming an increasingly vital habitat for hedgehogs. Feeding, nesting, mating and fighting were just some of the behaviours that could be logged for a three-month period, to help us understand how hedgehogs use our backyards and green spaces.

Launched in May while we were in full lockdown, the timing couldn't have been better. In such a difficult time, people increasingly found solace in nature, spending more time in their gardens and

watching out for night-time visitors they wouldn't normally see.

All submissions allowed us to further our understanding of how hedgehogs use our gardens. This will help us plan future campaigns and conservation strategies.

You can check out the video highlights of *Hedgehogs After Dark* via the Hedgehog

Street YouTube channel, and don't forget you can log hedgehog sightings via BigHedgehogMap.org. This helps us discover more about the distribution of this elusive, declining species. ●



What did we see?

✓ Over 5,000 instances of feeding logged. This is likely due in part to dedicated Hedgehog Champions providing supplementary food. Leaving overgrown, undisturbed patches helps ensure there's sufficient natural food for hogs.

✓ The next most commonly seen behaviour was roaming and the use of Hedgehog Highways, highlighting the importance of hedgehogs being able to access as many gardens as possible.

© Cate Barrow

Leave a world worth living in

With more and more species in trouble, our work gets tougher and we have to respond ever more quickly and smartly.

We can only do this with the help of our generous supporters. Legacy donations are an essential part of this, last year making up nearly a quarter of our total income.

Legacy gifts have a particular value. They allow us to strategically plan and react quickly to emergency situations. The impact of the Covid-19 pandemic brought this home with a bang as we recast our budgets and reassessed how to continue our activities and operations.

At the turn of the year, we'd been sad to hear of the passing of one our longest, and indeed oldest supporters, Mrs Kathleen Morant. It was therefore a special and humbling honour to receive a significant final gift from her through her estate. This unexpected funding, in a time of such dire uncertainty, allowed us to shift our

attention to areas where we could be most effective in the face of new restrictions and challenges.

We've decided to use the gift to extend our work with British mammals and stag beetles. Through promoting our monitoring of these species, we raise public awareness of their plight, as well as gathering vital monitoring information that directs our practical responses to it.

Thanks to the incredible generosity of Mrs Morant, and all those who choose to remember us in their will, we can be flexible and adapt our activities quickly and smoothly. We're so grateful to them all for their lasting support of our work. By leaving PTES a gift of any value in your will, you can make a significant difference to the fate of our wildlife, and ensure a world worth living in for future generations. ●



Legacies have enabled us to extend our work with UK mammals even further

© Shutterstock.com

Find out more
olivia.dobbs@ptes.org or call 020 7062 8614

PTES in a pandemic

You, our supporters, responded magnificently in difficult times to help us ensure our wildlife thrives.

We've evolved over the past few months. Like everyone else, in March we scrambled to adapt or abandon our plans in response to lockdown.

For the first time in 30 years, our dormouse volunteers couldn't monitor their nest boxes. Cumbria will have to wait for its dormouse reintroduction. Water vole waterways ran unchecked, hedgerows languished. Our woodland nature reserve had to fend for itself and training courses and public events were cancelled. Our international projects suffered a depressing sequence of setbacks that followed the pandemic around the world.

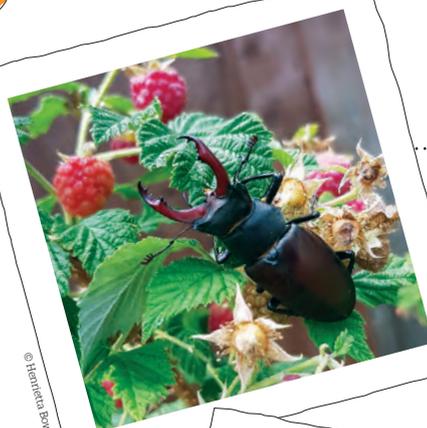
But it hasn't all been gloomy. Many people had more time and opportunity to watch wildlife and reconnect with nature, even if only from a window. So we made an extra effort to promote *Living with Mammals*, our survey recording wild mammals in gardens and urban green

spaces, and we held a virtual 'stag weekend' to draw attention to our stag beetle work.

It certainly paid dividends. We attracted more participants than ever (and 11,000 records of wild animals), and so we decided to launch a new *Living with Mammals* website next year, to make the recording of mammals in gardens, allotments and other green spaces easier, and to build interest even further by recording for more of the year, beginning this autumn.

You also recorded an amazing 18,000 stag beetles over the summer too – a record. Next year, because we were so pleased with the public response, we're planning a campaign for volunteers to create and map piles of deadwood in their gardens (which support insects such as stag beetles).

Times are still difficult, but even while as conservationists we've been challenged, nature responds, enjoying the diversion of so many people and finding a way to thrive. ●



© Hannah Bentley



© Diane Owen

Our surveyors shared some beautiful photos with us – thank you!

▶ Find out more
www.ptes.org/lwm
www.ptes.org/gsh

Dedicated followers of dormice

Despite coronavirus restrictions curtailing some of our work, there's still plenty to celebrate as our National Dormouse Monitoring Programme turns 30 this year.

Amid the gloom of lockdown, at PTES we have at least had something to celebrate – our National Dormouse Monitoring Programme (NDMP) turned 30 years old in 2020. Since 1990, we've built the programme up to one where our volunteers check up to 50 nest boxes twice a year at hundreds of sites in woodlands across England and Wales.

During that time, we've carried out 28 dormouse reintroductions at 24 separate locations in 12 counties, releasing nearly 1,000 dormice in total.

We've also trained hundreds of monitors – checking nest boxes and taking dormice out of them to weigh and measure them requires a licence because the species, and its nesting and resting places, is protected by law.

Even with the restrictions of the past six months or so, explained our dormouse

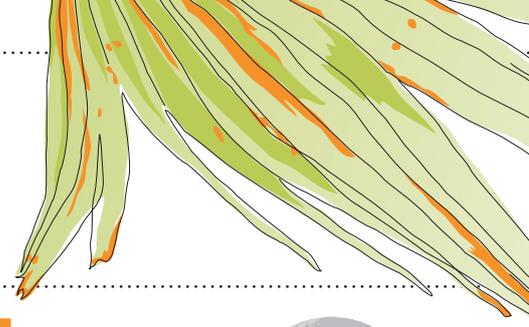
officer **Ian White**, PTES has continued to run its courses, though in order to conform to government Covid regulations, we've had to reduce the number of people who participate in them.



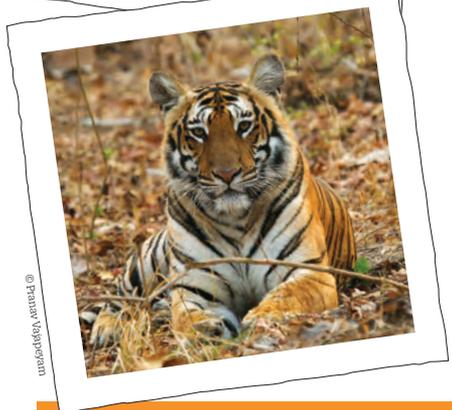
'We usually take nine delegates and have three trainers, but we have had to reduce this to four delegates and two trainers,' he said.

Holly, together with her sister Abbie, is part of the **Nottinghamshire Dormouse Group** and began her traineeship with PTES to gain a licence last year. 'In Nottinghamshire there are three woodlands to monitor, and I assist the licence holders with checking the dormouse nest boxes and handling the dormice to gain data such as sex, weight and age class,' she said.

Sadly, dormice need all the help they can get. Our 2016 report found that they'd disappeared from 17 English counties since the end of the 19th century and that numbers had declined by a third since 2000. ●



© Wild Shaale Project



© Pratiksha, Mumbai

Big cats in India

- ▶ India is the world's most important range country for tigers, with an estimated 1,500 to 2,000 mature individuals out of global population of about 3,000, according to the IUCN Red List.
- ▶ They are still widespread throughout India, with the biggest populations concentrated in the centre and south-west.
- ▶ Leopards in India are regarded as a subspecies and the first-ever national census carried out in 2014 estimated the population at between 12,000-14,000 individuals.

Tiger tutors



A programme designed to educate children in rural India about how to live alongside big cats and other wildlife has so far reached more than 20,000 students in more than 400 schools.

The Wild Shaale project, which has been receiving funding from PTES since it was launched in 2018, carries out its work in rural schools around eight tiger reserves in the Indian states of Karnataka and Maharashtra. People living in villages in these areas regularly have livestock injured or killed by wild carnivores and lose crops to, and suffer property damage by, wildlife.

Project leader **Dr Krithi Karanth**, from the **Centre for Wildlife Studies**, said they have carried out pre- and post-course evaluation tests to find out what the children have learned, and these have shown they clearly have more factual information and understand the issues better thanks to Wild Shaale.

The four-part programme for children aged 10-13 takes place over the course of one month in each school, and activities include learning about carnivore biology and behaviour, mask-making and other arts and crafts projects. It also aims to help children understand the emotions of animals in conflict situations.

'Children become more engaged and interested in wildlife, wild places and why

conflict occurs,' Dr Karanth said. 'They are also better able to process how to stay safe. Long term, the hope is that they will develop a higher tolerance to big cats and other species, and become stewards of these places.'

Conflict is a major issue for communities living around wildlife reserves. Dr Karanth launched a programme called Wild Seve in 2015 which aims to assist people who lose domestic animals or crops to big cats or elephants.

Over the course of four years, Wild Seve recorded 13,808 claims from 19 forest ranges around Bandipur and Nagarhole National Parks in Karnataka. These included more than 10,000 incidents of crop loss and 782 of livestock predation. There were 45 injuries to people and three human fatalities, too.

Real or perceived threats to crops and livestock from wildlife is, consequently, a concern for farmers throughout India and a key factor driving population declines. Reversing attitudes among young people can therefore play a major role in wildlife conservation. ●



© Ishika Ramakrishna

Jumbo plans



Classified by the IUCN as a unique subspecies of the Asian elephant, Sumatran elephants have lost at least half their population over the past 35 years or so.

Numbers are believed to be less than 2,000, and the main reason for their increasing scarcity is habitat loss and degradation to make way for human developments and agriculture, and deforestation to supply timber for the pulp and paper industries.

That's why PTES has been funding a project that aimed to find out exactly what the elephants' habitat requirements are within the Leuser Ecosystem, a vast area of rainforest covering 2.6 million hectares in the north of Sumatra. This information has been handed to local Indonesian conservation groups so they can buy land to plan and expand wildlife sanctuaries.

And this is now happening. To date, forestry officials have agreed to set aside 200,000 hectares as a wildlife reserve, with the aim eventually of reaching a total area of 600,000 hectares.

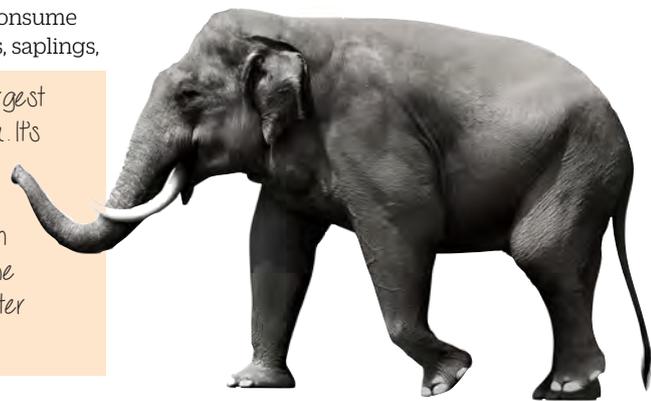
The research team was led by **Professor Korstjens** from **Bournemouth University** and **Dr Abdullah** from **Universitas Syiah Kuala**, and they found that Sumatran elephants require a multitude of vegetation types, including old-growth, mature forest with large trees to provide shade during the hottest times of the day.

Inside the forests, they are commonly found near the edge where they consume vines, grass, bamboo, twigs, leaves, saplings,

herbs and forest fruits such as figs and palm leaves', Korstjens said.

The research has helped team members from local conservation groups such as the Leuser Conservation Forum (FKL) in their conservation activities. 'We help them with information on habitat use and densities and increase international attention directed to their work,' she added. ●

The Leuser Ecosystem is the largest area of intact forest on Sumatra. It's home to tigers, orangutans and rhinos as well as elephants. Its forests and peatlands are carbon stores, while people living near the coast depend on it to provide water for farming.



Adders alive



One of the world's rarest snakes may have been handed a lifeline thanks to vital conservation work that PTES has helped to fund.

The Albany adder is entirely restricted to an estimated 800km² of one small part of the Eastern Cape of South Africa.

Its core range has been identified as Grassridge, a 9,000 hectare property just outside Port Elizabeth, owned by a private mining company, Pretoria Portland Cement (PPC). Sightings of the species are incredibly rare, but during a field trip to Grassridge in March 2020, four live adders and one dead one were seen during road surveys.

Now the **Endangered Wildlife Trust (EWT)**, which manages the project, is talking to PPC about drawing up a 'biodiversity stewardship' agreement that would mean parts of its landholding had nature reserve or protected area status.

In addition, the EWT is in discussions with the landowner of an adjacent farm, called Oliphantskop, where the adders are also believed to live. The situation here is

complicated by the imminent development of a wind farm – increased road traffic could be a threat to the snakes, and the owner requires reassurances that protection for the species wouldn't compromise the plans for the wind farm.

The tiny Albany adder (males measure about 25cm long) is so rare that only 26 confirmed sightings have been made of the species since it was discovered and named in 1937. Next to nothing is known about its diet, breeding habits or behaviour. There are no known records of anyone sustaining a bite from one either.

The main threats it faces are loss of its Coega Bontveld habitat, which is a mix of grassland and thickets, but they're also prone to being run over and there's a market for live animals – one landowner was offered \$7,000 (£5,400) for a live adder. ●

Great snakes!

Despite its restricted range, the Albany adder (below left) isn't the world's rarest snake.

Candidates for this title include the St Lucia racer, which is only found on one small island off St Lucia in the Caribbean, and Orlov's viper (below right), endemic to the Black Sea region of Russia.



Thanks to you

Our vital conservation work wouldn't be possible without you. We're so grateful to you for your generosity and loyalty, which has helped us to continue supporting our projects in the UK and abroad during these difficult times. Thanks for sticking with us. Here's a little of how your support has made a difference recently.

Cold comfort for Peak hares

In January, we asked you to help protect the Peak District's last mountain hares. A big thank you to everyone who made a donation to this project!

Our partner, Carlos Bedson, has been busy looking at all the data he's collected over the past few years so we can learn what our Peak District mountain hare population needs to survive. His findings show that mountain hares really love the cold. This is worrying as temperatures are forecast to rise by more than 2°C over the next 30 years. Last winter, Carlos noticed some mountain hares desperately clinging to the last patches of snow and wonders whether they'll be able to tolerate the warmer temperatures. ●



A mountain hare trying to keep cool

Berry merry

We're very grateful to our partner, Warner's, for their latest donation to us and our hedgerow work.

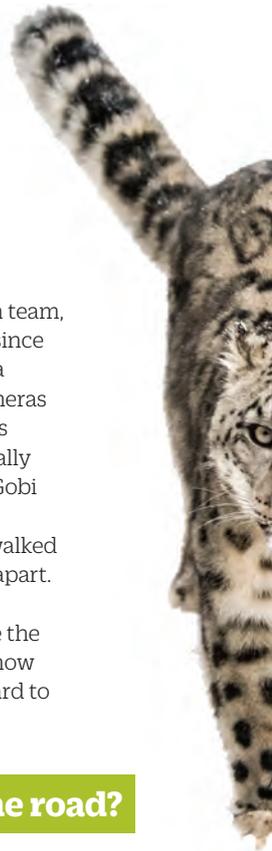
Warner's gin is crafted with respect for nature and the community; they draw water from their spring, grow their own botanicals and collect fresh honey from their own beehives. In return, they aim to give back more than they take by re-sowing, replanting and rebuilding. For each bottle of their raspberry gin with fresh hedgerow fruits which is sold, we receive a donation for our hedgerow work that's helping dormice and other hedgerow wildlife. Visit their gin shop to buy your bottle of Warner's raspberry gin online at warnersdistillery.com. Thanks to everyone who supports us and Warner's. Cheers! ●



Snapping snow leopards

We were overwhelmed by the incredible response we had to our snow leopard appeal in February. Thank you to everyone who donated to help us protect this beautiful big cat.

Puji Lkhagvajav, a member of Bayara's conservation team, has been in touch to let us know what's happened since we launched our appeal in February. She's been to a protected area in the Great Gobi to install some cameras that will hopefully capture images of snow leopards and other wildlife, such as wild camels or the Critically Endangered Gobi bear. Temperatures in the Great Gobi range from 50°C to -30°C, and there are enormous mountain ranges to cross. Nevertheless, the team walked up to 14km a day and set up 45 cameras, each 5km apart. Snow leopard density is likely to be low in this area because of the landscape, but Bayara and Puji hope the cameras will pick up some pictures of the elusive snow leopards that live in the region. We're looking forward to seeing what they find! ●



How did the hedgehog cross the road?

Lots of you dug deep when we asked for help to investigate how traffic is affecting hedgehogs. Our PhD student Lauren Moore and the team here are so grateful to you for supporting this vital research.

Lauren's been very busy, having recently completed her first surveys for the project, and she's gathered some wonderful results. One of the study sites, in the heart of Nottinghamshire, has one of the highest hedgehog densities ever recorded. The hedgehogs have been really active and travel far each night; they've been found in a variety of places, from foraging around playing fields and parks, to wandering the streets, and even rustling in a compost bag. Lauren says, 'It's encouraging to find that populations can thrive when the conditions are suitable. It's an immense privilege to be surveying hedgehogs, and there's nothing more enjoyable than being in the right place at the right time to see one digging down in the grass for some beetles or worms. Thank you so much for supporting my work!' ●

An average hedgehog has up to 7,000 spines!





Bee the difference for insects

Thank you and welcome to all of our lovely new Insect Champions!

Over the summer, we ran our Insect Champion campaign and the response was incredible. Thousands of you showed your support for insects and made small changes in your garden or local green space to give them a fighting chance. From making a ground-nesting bee habitat to building an insect hotel, you're creating vital habitats that will not only benefit insects, but the wildlife that depends on them too. For a range of insect friendly activities and instructions, please visit ptes.org/mygarden ●

Sow your seedballs!

Our partners, Seedball, have launched an exclusive PTES tin for hedgehogs.

Seedball is a non-profit company on a mission to help increase the abundance of British wildflowers and the wildlife that depends on them. Wildflowers are a great addition to creating a hedgehog friendly garden. Not only do they provide shelter for hedgehogs, but also attract a range of tasty insects for them to feed on. Each tin contains 20 seed balls, enough to cover 1m² in a garden bed or 3-5 medium-sized pots, and each seed ball contains approximately 30 seeds from a mix of yellow rattle, wild carrot, birdsfoot trefoil, tufted vetch, self heal and poppy. For every

Hedgehog Mix tin sold, we receive a kind donation towards our conservation work. Get yours at ptes.org/shop or seedball.co.uk ●



That's quite a pile, crocodile!

In 2017, we asked for help to rescue Siamese crocodiles from extinction. Your donations made a huge difference.

Just 20 years ago, Siamese crocodiles were presumed extinct in the wild and their future looked bleak. That's why we decided to support an exciting conservation programme to safeguard their future. A 400,000-hectare area of forest in the central Cardamom Mountains of Cambodia was protected specifically for the crocodiles, and a breeding programme set up. Local communities were brought on board as wardens to protect released animals. And we have good news to report – 111 Siamese crocodiles have been released into the wild, and wardens are spotting baby crocodiles and large nests of eggs, which means



Read more about Siamese crocs on pages 8-9

they are reproducing naturally. The future of the world's most endangered crocodile looks more secure, thanks in part to PTES supporters. ●

Reds' Highland return

We asked you to help protect our native red squirrels. Thank you so much to everyone who made a generous gift.

The Trees for Life team has been hard at work, having released red squirrels into the Morvern peninsula on the west coast of Scotland, before restrictions imposed by the pandemic meant its work had to stop. Plans are underway for the next release into Sutherland on the north-east coast, and the team is looking forward to getting back out there and reintroducing red squirrels where they belong. Alan McDonnell, conservation manager at Trees for Life, has this message for donors. 'Thank you for the support you have given our project, The Reds Return. We're establishing new robust populations of red squirrels in parts of their former ranges, well away from the threat of grey squirrels and in good habitat. We're delighted with that. And we really want to thank you for all the support you've given us.' ●





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In the first-ever Red List of British Mammals produced this year, hazel dormice are classified as Vulnerable to extinction, the population having declined by half since 2000. We know this sad state of affairs thanks in part to the work of hundreds of volunteer dormouse monitors who check nest boxes for us – some of them have been doing this for 30 years.

Next year we start a two-year quest to reintroduce a sustainable population of dormice to Cumbria, the northern-most extremity of their range in Britain. By connecting the landscape through strategic hedgerow management and wildlife bridges, we'll give them the best chance to thrive there again.

Your support is vital.

Thank you.



people's
trust for
endangered
species