

Briefly

INTERNATIONAL

Crop wild relatives poorly represented in seed banks

The wild relatives of domesticated crop plants are poorly represented in seed banks and plant repositories established to protect biodiversity, according to a study of the global distribution of 1,076 taxa related to 81 crops. The genetic diversity of these relatives could be used to increase crop yields or develop more nutritious and resilient crop varieties. Of the 1,076 relatives studied, only 45 were adequately represented in seed banks. The most critical gaps in seed collection are in the Mediterranean and the Near East, western and southern Europe, South-east and East Asia and South America. The researchers involved are calling for a systematic effort to improve the conservation of crop wild relatives, and their availability for use in plant breeding, and highlight cassava, potato and sorghum as being among the highest-priority crops.

Source: *Nature Plants* (2016) [dx.doi.org/10.1038/nplants.2016.22](https://doi.org/10.1038/nplants.2016.22)

Behaviour change experts come together to tackle illegal wildlife trade...

More than 100 behaviour change experts and practitioners met in Hong Kong in March to collaborate on the development of innovative approaches to change the knowledge, attitudes and practice of consumers of illegal wildlife products. Participants represented c. 60 organizations and brought a wealth of experience in influencing consumer behaviour in a diversity of markets, economies and cultures, and in fields other than conservation. Demand reduction is crucial in tackling poaching and wildlife trafficking, and one of the outcomes of the meeting was to develop a community of practice to bring this about by identifying the best ways to change consumer preferences, behaviour and intentions. Strategic actions were agreed to improve complementary approaches to changing consumer attitudes towards illegal wildlife products, including for medicinal, investment and social status purposes.

Source: *TRAFFIC* (2016) traffic.org/home/2016/3/11/changing-consumer-choice-experts-gather-to-ensure-a-future-f.html

...and Buckingham Palace Declaration signals commitment of global transport leaders to shut down trafficking routes

At an event in Buckingham Palace, London, on 15 March 40 senior representatives of airlines, shipping firms, port operators and Customs agencies, as well as intergovernmental organizations and conservation NGOs, signed the Declaration of the United for Wildlife International Taskforce on the Transportation of Illegal Wildlife Products. The Declaration commits signatories to raising standards across the transportation industry to prevent trafficking of wildlife products, with a focus on information sharing, staff training, advanced technology and resource sharing across companies and organizations globally. Leading transportation firms will provide support to those in poorer nations, sharing their expertise. Signatories of the Declaration include companies and organizations based in China, Denmark, Kenya, UAE, UK and USA. The Duke of Cambridge welcomed the Declaration, saying that by honouring their commitments the signatories could 'secure a game changer in the race against extinction'.

Source: *TRAFFIC* (2016) traffic.org/home/2016/3/15/global-transport-leaders-sign-historic-declaration-in-fight.html

Translocations of marine species on the rise...

According to the first global review of marine conservation translocations, conservationists are increasingly moving threatened marine plants and animals to new locations in an effort to save species and ecosystems. The increase in translocations is particularly evident in coastal areas, where human impacts are greatest and there is a need to prevent the collapse of critical ecosystems, such as coral reefs, mangroves and seagrass meadows, which provide foraging and nursery habitat for many other species. Translocations are not without risk, as introducing new species to an ecosystem can disturb population dynamics or introduce disease, nor will they prevent the loss of many species and ecosystems unless action is also taken to address habitat loss, carbon dioxide pollution, climate change and overfishing.

Source: *IUCN* (2016) iucn.org/news_home/page/?22452/Marine-translocations-on-the-rise-as-ecosystems-threatened

...as ocean warming kills coral reefs

The third global mass coral bleaching is underway, and scientists are warning that coral reefs could be driven to extinction within decades. Mass bleaching, a climate-driven phenomenon that transforms healthy coral into white, lifeless skeletons, was first observed in 1998. The current bleaching event is affecting large areas of Australia's Great Barrier Reef as well as other reefs around the globe, from the Hawaiian Islands to Fiji and Asia. Coral reefs are the most biodiverse marine ecosystems and millions of people depend on them for food and livelihoods, and the protection they provide against storms and flooding. The world's reefs are under immense pressure, not only from climate change but also from overfishing and pollution, and urgent action is needed to mitigate these threats.

Source: *WWF* (2016) [wwf.panda.org/wwf_news/?264851/Warming-waters-bring-coral-bleaching-across-the-globe](https://www.panda.org/wwf_news/?264851/Warming-waters-bring-coral-bleaching-across-the-globe)

Eradicating invasive mammals stems biodiversity loss on islands

The first global study quantifying the benefits of eradicating invasive mammals from islands has concluded that investment in this conservation intervention offers an opportunity to stem the loss of biodiversity. The study, which comprised a large-scale literature and database review and expert interviews, found that 596 populations of 236 native species on 181 islands benefited from such eradications. Positive responses identified included population increases, recolonization and successful reintroductions. Non-native, invasive mammals have been introduced intentionally or unintentionally to 90% of archipelagos worldwide. Once introduced, mammals such as rodents, feral goats and feral cats have devastating consequences for ecosystems and represent significant threats to native species through predation, competition and habitat loss. Examples of successful outcomes following eradications include the discovery of the New Zealand storm petrel breeding on Little Barrier Island, having been thought to be extinct for more than 150 years, and the recovery of the endemic island fox on California's Channel Islands.

Source: *BirdLife International* (2016) birdlife.org/worldwide/news/conservation-silver-bullet

Global strategy for protecting sharks and rays

A 10-year strategy for conserving sharks and rays was released in February to coincide with a Convention on Migratory Species meeting on shark conservation, which took place in Costa Rica. The strategy calls for global action to protect and restore vulnerable populations of sharks and rays, and highlights the need for more attention to rays. There are c. 650 species of rays, which include skates, stingrays, sawfishes, guitarfishes and devil rays. Overfishing is the most significant threat to both sharks and rays, and volumes of sharks and ray meat traded on the international market have doubled since the 1990s. Meanwhile demand for shark fin in Asia remains a significant driver of overfishing. The strategy calls on member countries of the Convention on Migratory Species to establish strict protection for all five threatened sawfish species and all manta and devil rays, and impose national and regional fishing limits on migratory sharks.

Source: *TRAFFIC* (2016) traffic.org/home/2016/2/15/conservation-groups-call-for-more-protection-for-rays-as-wel.html, & *WWF* (2016) wwf.panda.org/wwf_news/?261570/New%2Dglobal%2Dstrategy%2Dto%2Dsave%2Dsharks%2Dand%2Drays

More ambitious targets needed for ocean protection...

With only 2% of the world's oceans currently designated as marine protected areas there is still a long way to go to achieve the target of 10% by 2020 agreed under the UN Convention on Biological Diversity. However, researchers have concluded that even 10% is insufficient, and 30% of ocean area needs to be protected to preserve marine biodiversity, fisheries productivity and all of the economic and cultural benefits provided by the sea. This conclusion was drawn following a review of 144 studies that looked at how much ocean should be protected to achieve a particular management goal, such as protecting biodiversity, preventing population collapse, or ensuring connectivity of populations between marine protected areas. In 2015 2.5 million km² of ocean area was designated as marine protected areas, with new reserves declared in the Pitcairn Islands, Easter Island, New Zealand's Kermadec Islands, and Palau.

Source: *Conservation Letters* (2016) [dx.doi.org/10.1111/conl.12247](https://doi.org/10.1111/conl.12247)

...as negotiations get underway to protect the high seas

The first round of negotiations towards a new treaty to conserve biodiversity on the high seas concluded at the United Nations in New York City in April. Representatives of more than 80 nations participated in negotiating the terms of the treaty, which is not expected to be finalized until 2019, at the earliest. The high seas comprise all ocean areas beyond national jurisdiction, and cover 43% of the Earth. They are largely un-governed, although some commercial activity is limited and monitored by government agencies and international governing bodies under the UN Convention on the Law of the Sea. With c. 10 million tonnes of fish caught on the high seas annually, overfishing is a serious and growing problem that could ultimately cause the collapse of whole populations of fish and destroy fisheries. Beyond maintaining fisheries, it is hoped that the treaty will also address illegal activity, human rights abuses, and marine pollution. Source: *Mongabay.com* (2016) news.mongabay.com/2016/04/first-round-of-negotiations-to-regulate-fishing-on-the-high-seas-concludes-at-the-un/

Industrial activities threaten natural World Heritage sites

According to the *WWF* report *Protecting People Through Nature* almost half of natural World Heritage sites are threatened by industrial activities such as mining, illegal logging, oil and gas exploration, and infrastructural development. Natural World Heritage sites are recognized as the world's most important protected areas, and as well as their environmental importance they provide social and economic benefits. An estimated 11 million people depend directly on these sites for food, water, shelter and medicine but these ecosystem services and the communities that depend on them are increasingly threatened by industrial development. Climate change is another key threat to these protected sites and may soon become the most widespread. To date, only one natural World Heritage site, Oman's Arabian Oryx Sanctuary, has been delisted. Almost 90% of the Sanctuary was opened up to oil prospecting, and by 2007, when the site was delisted, the Arabian oryx population had declined by 85% (see also *Oryx*, 50, 1–2).

Source: *IUCN* (2016) iucn.org/news_home/page/?22640/Concerns-over-scale-of-threats-to-natural-World-Heritage-confirmed-by-new-report, & *Mongabay.com* (2016) news.mongabay.com/2016/04/half-world-heritage

sites-threatened-harmful-industrial-activities-new-report-finds/

Putting conservation at the heart of the Olympic Games

IUCN has entered into an agreement with the International Olympic Committee to ensure that conservation and sustainability are integrated into the bids of the four candidate cities competing to host the 2024 Olympic Games and Paralympic Games. IUCN will review the information provided by the four cities—Los Angeles, Rome, Budapest and Paris—on their natural environment, including important areas for biodiversity, their management plans for air, water and energy, and their sustainable construction policies. It is also working to support the integration of nature into the International Olympic Committee's Sustainability and Legacy Strategic Framework. Last November IUCN facilitated a number of workshops in Lausanne, Switzerland, to share its expertise, conservation tools and best practices with the four candidate cities.

Source: *IUCN* (2016) iucn.org/news_home/page/?22657/IUCN-teams-up-with-the-International-Olympic-Committee-for-conservation-win-in-2024

Shedding sun light on monarch butterfly migration

Mathematicians and biologists have joined forces to solve the mystery of one of nature's most famous migrations—the monarch butterfly's 2-month journey from North America to specific overwintering sites in central Mexico. They built a model circuit to recreate the internal compass the butterfly uses to navigate on its epic flight, and discovered that the input cues to neurons in the butterfly's antennae and eyes depend entirely on the sun. The horizontal position of the sun and the time of day together guide the butterfly along its southerly path, with midday being the optimal time for migratory flight. The butterfly uses its circadian clock to compensate for the changing position of the sun. The scientists aim to build a robotic monarch butterfly that could track the insects along their entire migration. There is increasing concern about the ongoing decline of the species, which is largely attributed to the loss of its breeding habitat, milkweed.

Source: *Cell Reports* (2016) [dx.doi.org/10.1016/j.celrep.2016.03.057](https://doi.org/10.1016/j.celrep.2016.03.057), & *BBC News* (2016) bbc.co.uk/news/science-environment-36046746

Moose move northwards as temperatures rise

The distribution of the Alaskan moose has been shifting northwards as the species colonizes areas of tundra habitat that were previously unsuitable because of a lack of forage availability. Unlike caribou, moose cannot dig down through the snow to forage, and can only feed on plants and shrubs that protrude through the snow layer. Rising temperatures in the tundra have resulted in an increase in the size of the shrubs on which the moose depends for its survival in winter, from 1.1 m in 1860 to c. 2 m in 2009. The northwards movement of moose is not confined to the Alaska moose but has also been observed in the western moose in Canada and the Eurasian moose in Russia. Other boreal species, including the snowshoe hare, are also moving northwards, and scientists believe they are seeing the emergence of a new wildlife community on the tundra.

Source: *PLoS ONE* (2016) [dx.doi.org/10.1371/journal.pone.0152636](https://doi.org/10.1371/journal.pone.0152636), & *BBC News* (2016) bbc.co.uk/news/science-environment-36038237

EUROPE

Mass rewilding effort to restore Europe's long-lost beasts

Some of Europe's largest grazing species that were once extinct in the wild are making a comeback thanks to the efforts of the Dutch trust Rewilding Europe, which is behind many rewilding initiatives throughout the continent. Following a breeding programme the population of European bison, which was once widespread throughout the open countryside of Europe and is Europe's largest land mammal, now numbers 3,000. Four individuals were released in Maashorst nature reserve in the Netherlands in March, and another four in the Veluwe region in April. In May a herd of 20 bison were released in Romania, where the species is a symbol of national pride and economic renewal, offering the prospect of tourism and jobs. It is hoped that reintroducing grazers to Europe's degraded landscapes will encourage the return of other species, such as butterflies, lizards and dung beetles and, in time, predators and scavengers, such as wolves.

Source: *New Scientist* (2016) newscientist.com/article/mg22930664-100-reviving-europes-longlost-beasts-through-mass-rewilding, & newscientist.com/article/2081968-bison-return-to-forests-across-europe-as-part-of-mass-rewilding/

European Union publishes Action Plan to tackle wildlife trafficking

Following extensive consultations in 2014 and 2015, in February the EU published its Action Plan to tackle the global poaching crisis. The Plan proposes that all EU countries should consider wildlife trafficking a serious crime under the United Nations' Convention against Transnational Organized Crime, with custodial sentences of at least 4 years for those convicted, and highlights improved enforcement as a key factor in tackling the illegal wildlife trade. This could be achieved through enhancement of EU-TWIX, the EU's information exchange platform to facilitate enforcement collaboration, and strengthening of links with partners in the International Consortium on Combating Wildlife Crime. The Plan also addresses the need for consumer behaviour change, and acknowledges the role the private sector could play in cooperating with other agencies to stop the illegal trade. Implementation of the plan will involve police, customs and prosecutors, and its success will depend on high-level political commitment from all EU Member States.

Source: *TRAFFIC* (2016) traffic.org/home/2016/2/26/european-union-publishes-action-plan-on-tackling-wildlife-cr.html

A glimmer of hope for Europe's olives...

The initial findings of a study of the invasive pathogen *Xylella fastidiosa* indicate that some varieties of olive trees may be resistant to the disease, which was first detected in olive trees in southern Italy in October 2013. The study was funded by the European Food Safety Agency amid concerns for the potential devastation of Europe's olive harvest. The disease, which has multiple hosts and vectors, invades the vessels that a plant uses to transport water and nutrients and ultimately results in the death of the plant. Although it is too early to say whether olive varieties that have displayed tolerance to the infection will nonetheless be adversely affected or have reduced yields, the findings of the study offer hope that the spread of the disease can be controlled with appropriate management by breeders. The disease has not been recorded in Spain, the world's largest producer of olive oil.

Source: *BBC News* (2016) bbc.com/news/science-environment-35917107

... but the ash tree is on the brink of extinction...

The dual threats of fungal disease and an invasive beetle are set to wipe out the ash tree in Europe. The disease known as ash die-

back, or Chalara, was first seen in Eastern Europe in 1992. Since then it has spread throughout the continent, affecting > 2 million km² from Scandinavia to Italy. The disease kills the leaves, then the branches and the trunk, eventually killing the whole tree. The loss of the ash tree will have a significant impact on biodiversity, with c. 1,000 species associated with ash or ash woodland, including birds, mammals and invertebrates. Meanwhile the emerald ash borer, a bright green beetle native to Asia, is spreading west into Europe at a rate of c. 41 km per year, posing a further threat to Europe's ash trees. The adult beetles feed on ash trees and cause little damage but the larvae kill trees by boring under the bark and into the wood.

Source: *BBC News* (2016) bbc.com/news/science-environment-35876621

... and Poland approves logging in primeval woodland

The Polish government has approved large-scale logging in Białowieża Forest, Europe's last primeval woodland, which is home to 20,000 animal species, including 250 birds and 62 mammals, among them Europe's largest mammal, the bison. The forest, which spans 150,000 ha in Poland and Belarus, where it is fully protected as a nature park, is also home to Europe's tallest trees, with firs, oaks and ashes >40 m in height. The decision to allow large-scale logging of the forest was intended to combat infestation by the spruce bark beetle, and according to Poland's environment minister it will not apply to strictly protected areas of the forest, which was designated a UNESCO World Heritage Site in 1979. The decision has been criticized by scientists, environmental NGOs and the EU, which may launch punitive procedures against Poland for violation of the Natura 2000 programme.

Source: *The Guardian* (2016) theguardian.com/environment/2016/mar/26/poland-approves-large-scale-logging-in-europes-last-primeval-forest

Results of Iberian lynx census are cause for optimism

The 2015 census of the Iberian lynx revealed a significant increase in the population, now estimated to be 404 individuals. One hundred and twenty breeding females were identified across five areas of the Iberian Peninsula: Doñana, Sierra Morena, Montes de Toledo, and Valley Matachel in Spain, and Vale do Guadiana in Portugal. The species has been the focus of concerted conservation efforts since it was declared the world's most threatened cat in 2002,

but despite the good news regarding population growth the Iberian lynx remains threatened by declines of rabbits, its main prey. A new strain of viral haemorrhagic disease has caused rabbit populations to decline by more than 50% in some areas critical to the lynx. Efforts are now needed to address the decline in rabbit populations and the threat of vehicular traffic to ensure the continued conservation of the Iberian lynx.

Source: WWF (2016) wwf.panda.org/wwf_news/?264853/Worlds%2Dmost%2Ddangerous%2Dcat%2Dgrows%2Dto%2Dover%2D400%2Dindividuals

Citizen science data reveal that some migratory birds are staying longer in the UK

An analysis of amateur data on bird migrations, spanning > 50 years, has revealed that some common migrating birds are remaining in the UK for 2 weeks or more longer compared with half a century ago. The collection of data began in the 1960s, with paper records, and continues today via the internet-based volunteer observation network BirdTrack. Of the 14 species studied 11 were found to arrive earlier now, and four leave later. The findings highlight the important contribution of amateur data in ornithological studies. Whereas professional researchers have tended to count birds arriving at a few coastal locations, and concentrated on recording the dates of the earliest arrivals, such biases are avoided in the data recorded by citizen scientists, who also record birds' departure dates. One hypothesis for the late leaving is that females are taking advantage of the longer breeding season to lay more than one clutch of eggs.

Source: *New Scientist* (2016) www.newscientist.com/article/mg23030671-300-common-uk-migrating-birds-are-arriving-earlier-or-leaving-later/

Sir David Attenborough opens global hub for nature conservation

On 6 April Sir David Attenborough officially opened a global conservation hub named in his honour, in Cambridge, UK. The new campus represents the largest cluster of nature conservation organizations and university researchers in the world, and provides a unique collaborative space for integrating conservation research and practice and developing conservation leaders. By bringing together over 500 conservation experts the campus will facilitate the effective sharing of knowledge, networks and experiences between individuals and institutions, who will work together to develop solutions to the challenges faced by the

natural world. Sir David Attenborough said, 'By bringing together leaders in research, practice, policy and teaching, we stand the greatest chance of developing the solutions required to save our planet. I am enormously proud that these collaborations are occurring in a building bearing my name.'

Source: *FFI* (2016) fauna-flora.org/news/sir-david-attenborough-opens-global-hub-for-nature-conservation/

Closure of UK's national wildlife crime unit averted as funding secured

The police unit responsible for investigating crimes against Britain's wildlife was threatened with closure at the end of March amidst uncertainty over funding; however, in a last-minute reprieve the government committed to funding the unit for the next 4 years. The national wildlife crime unit was established in 2006 to investigate offences such as the killing of birds of prey, rare-bird egg theft, poaching of deer, hare coursing, and international smuggling of threatened species. The illegal wildlife trade is often linked to organized crime and, according to Interpol estimates, is worth USD 10–20 billion annually. Wildlife crime is increasingly carried out online, and a portion of the funding allocated to the unit is dedicated to tackling online crime. The specialist unit provides expert intelligence and analysis, and conducts c. 200 investigations per year.

Source: *The Guardian* (2016) theguardian.com/uk-news/2016/feb/18/national-wildlife-unit-to-close-within-weeks, & theguardian.com/environment/2016/mar/01/uks-national-wildlife-unit-wins-late-reprieve-from-closure

Beavers vindicated by Scottish study

Last year residents of a village in Perthshire blamed the local beaver population for flash flooding, claiming that some of the debris that washed through their village during the floods showed signs of having been chewed by animals upstream. However, a study by researchers at Stirling University has found that the dams built by beavers actually mitigate flooding by storing water and then releasing it slowly. Furthermore, by comparing sites that were modified and unmodified by beavers on headwater streams the researchers found that habitat engineering by beavers benefits aquatic biodiversity and ecosystem processes in freshwater environments, resulting in increased aquatic plant life and species diversity, and reduced concentrations of agricultural pollutants. However, the beavers remain unpopular with the farmers' union, which claims that they cause damage to farmland,

flood banks, and woodland. There are estimated to be more than 150 beavers living and breeding successfully in the wild in the southern highlands.

Source: *Freshwater Biology* (2016) [dx.doi.org/10.1111/fwb.12721](https://doi.org/10.1111/fwb.12721), & *The Guardian* (2016) theguardian.com/environment/2016/feb/16/beavers-blamed-flash-floods-scotland-control-flooding-study

Bulgaria's Kresna Valley threatened by motorway plans

Bulgaria plans to build a motorway through the Kresna Gorge, which is home to golden eagles, griffon vultures and peregrine falcons, and is also an important migratory path for bears, wolves and jackals. There are > 3,500 species of flora and fauna in the gorge, including snakes, turtles and bats that are found nowhere else in Europe. The development is opposed by local residents, who predict it will destroy their health, agriculture and local economy, and drive more young people to leave the region. The EU Birds and Habitats Directives prohibit actions that would destroy wildlife or wildlife sanctuaries, yet ironically the EU, which has funded the reintroduction of griffon vultures in the valley, has also offered EUR 1 billion of funding for the motorway on condition that it is tunnelled underground. Bulgarian authorities have rejected the tunnelling proposal.

Source: *The Guardian* (2016) theguardian.com/environment/2016/feb/17/bulgarian-motorway-poised-to-carve-up-wildlife-haven

Conservationists battle to rid Berlenga Island of the Hottentot fig

The Hottentot fig is characterized by large yellow or light pink flowers but its beauty belies its destructive nature. Native to South Africa, the plant was introduced in several countries, including around the Mediterranean Sea, where it quickly colonized vast areas. The species grows rapidly, forming dense carpets of vegetation that are almost impenetrable by native plants, and also alters the chemical composition of the soil. The Hottentot fig was introduced to the islands of Portugal's Berlengas archipelago in the 1950s, and is now a major threat to the conservation of rare and endemic plants. It has also taken over many of the cavities that would otherwise be used by Cory's shearwater for nesting. Forty volunteers and technicians have been working to remove the plant from Berlenga Island as part of the EU-funded LIFE Berlengas project, which aims to have the island completely cleared of the plant by 2018.

Source: *BirdLife International* (2016) birdlife.org/europe-and-central-asia/news/plants-funny-name-belies-its-dangerous-nature

Gibraltar ends balloon release for the sake of the environment

In response to consistent pressure from environmental campaigners Gibraltar has ended its 24-year tradition of releasing thousands of red and white balloons on its national day. Balloon releases add to the already worrying levels of marine and terrestrial plastic pollution and pose a significant threat to wildlife. The UK-based Marine Conservation Society has actively campaigned against balloon releases on the basis of the damage caused to marine wildlife by such pollution. When balloons eventually enter the marine environment they may be mistaken for food by many species, particularly turtles. Once ingested, balloons can block digestive systems and result in starvation. Animals can also become entangled in the strings attached to balloons. The Gibraltar Ornithological & Natural History Society and the Environmental Safety Group, a Gibraltar-based NGO, have been campaigning for a decade to end Gibraltar's balloon releases.

Source: *The Guardian* (2016) theguardian.com/environment/2016/apr/07/gibraltar-ends-annual-balloon-release-on-environmental-grounds

NORTH AFRICA AND MIDDLE EAST

Illegal killing of birds in British territory of Cyprus

According to survey data from BirdLife Cyprus and other conservation organizations more than 800,000 birds were trapped and killed illegally on a British military base in Cyprus last autumn. More than half of the > 150 species recorded are of conservation concern, including two songbirds that breed only in Cyprus: the Cyprus warbler and the Cyprus wheatear. The killing is being carried out on an industrial scale by organized gangs to provide the main ingredient for the local delicacy *ambelopoulia*, and the gangs are estimated to earn EUR 15 million annually from this activity. The authorities at the military base have taken various steps to tackle the killing of birds, including the removal of c. one-third of the invasive acacia trees planted on the firing range to attract migrant birds. However, more needs to be done to put an end to this illegal activity, including increased

enforcement against restaurants serving *ambelopoulia*.

Source: *BirdLife International* (2016) birdlife.org/europe-and-central-asia/news/almost-1-million-birds-still-illegally-killed-british-territory-cyprus

SUB-SAHARAN AFRICA

African rhinoceros poaching crisis deepens

Data compiled by the IUCN Species Survival Commission's African Rhino Specialist Group indicate that poaching of African rhinos has increased for the sixth year in a row. Poachers killed at least 1,338 rhinos across the continent in 2015, which is the highest level of poaching recorded since the current crisis began to emerge in 2008, driven by demand for rhino horn in South-east Asia. South Africa, which is home to 79% of Africa's rhinos, has borne the brunt of the killing, and it is estimated that populations of both black and white rhinoceros have declined in Kruger National Park in recent years, although net increases in numbers have been recorded elsewhere in South Africa and in other countries. Mozambique, which has been associated with much of the poaching and trafficking of horn, is tightening its legislation, increasing penalties, and working to implement its National Ivory and Rhino Action Plan.

Source: *IUCN* (2016) iucn.org/news_home-page/?22519/IUCN-reports-deepening-rhino-poaching-crisis-in-Africa

Pilot study aims to reduce poisoning of African vultures

Poisoning is the greatest threat to Africa's 11 species of vultures, four of which (the hooded, white-backed, white-headed and Rüppell's vultures) are Critically Endangered. The majority of vulture deaths as a result of poisoning appear to be indiscriminate and occur as a by-product of intentional poisoning of other predators, whose carcasses attract the vultures (see also *Oryx*, dx.doi.org/10.1017/S0030605316000569). A 3-year project to tackle the escalating crisis, *Saving Africa's Vultures*, is now underway at three pilot sites: the Chobe District of Botswana, the Masai Mara National Reserve in Kenya, and the Hwange National Park in Zimbabwe. The aims of the study are to learn more about the dynamics of how and why poisoning is taking place and develop tools and mechanisms to bring about stricter regulations for agro-chemicals and other toxic substances. Other threats facing Africa's vultures include illicit trade for

traditional medicine, hunting for bushmeat, habitat loss and degradation, and anthropogenic disturbance.

Source: *BirdLife International* (2016) birdlife.org/africa/news/african-vulture-pilot-study-aims-reduce-poisoning-deaths

Sierra Leone leads the way in climate change mitigation...

As well as being home to 60 globally threatened species, including the pygmy hippopotamus, yellow-casqued hornbill and Diana monkey, Sierra Leone's 70,000 ha Gola Rainforest is a significant carbon sink. During August 2012–December 2014 the Gola REDD (Reduced Emissions from Deforestation and forest Degradation) project prevented the emission of 1.19 million tonnes of CO₂ into the atmosphere. REDD is an important mechanism for countries such as Sierra Leone, which have rich tropical rainforests on which communities depend for their livelihoods. Such nations need to achieve economic development without unsustainable exploitation of their natural resources. The Gola project has provided social benefits for local communities and its emission reduction measures have been validated and verified by independent auditors. Consequently it is the first conservation project of its kind in West Africa to enter the world of carbon trading, and verified carbon credits from Gola may now be purchased on the voluntary carbon market.

Source: *BirdLife International* (2016) birdlife.org/europe-and-central-asia/news/why-gola-rainforest-true-forest-hope

...and Namibia leads on tackling seabird bycatch

Namibia is one of the most progressive countries in tackling seabird bycatch and is enacting legislation to ensure that all longline fisheries adopt specific measures to mitigate bycatch. Furthermore, the government has 100% seabird bycatch monitoring coverage on the nation's fishing vessels, and plans to improve its data collection to facilitate assessment of the effectiveness of mitigation measures and compliance with regulations. Meanwhile, the Albatross Task Force, established by BirdLife International, has been supporting the fishing fleet to implement mitigation measures voluntarily, and will continue to support the government's efforts, monitor progress, and assess the effectiveness of the solutions being implemented. In comparison, countries in Europe are lagging behind, and the EU has no legislation in place to stop the killing of c. 200,000 seabirds annually as bycatch in European waters. The European

Commission has, however, now proposed legislative action that will bind all EU fishers to apply technical solutions to mitigate seabird bycatch.

Source: *BirdLife International* (2016) birdlife.org/europe-and-central-asia/news/africa-leading-way-ending-seabird-bycatch

Scimitar-horned oryx return to Chad

After an absence of more than 25 years, scimitar-horned oryx have returned to Chad. On 14 March 25 oryx were flown to Chad from the world herd being assembled by the Environment Agency Abu Dhabi (EAD). The oryx were released into their holding pen in the Ouadi Rimé–Ouadi Achim Game Reserve. Following a period of acclimatization the oryx will be collared for subsequent satellite-based monitoring and released into the wild later this summer. Further shipments of oryx from Abu Dhabi are expected over the next 2–3 years, with an initial target of 500 free-ranging animals. The oryx became extinct in the wild in the late 1980s because of over-hunting. The initiative, piloted by EAD and the Chadian government, is implemented on the ground by the Sahara Conservation Fund, with the assistance of the Smithsonian Conservation Biology Institute, the Zoological Society of London, and the Fossil Rim Wildlife Center.

Source: *Sandscript* (2016), 19, saharaconservation.org/?-Sandscript

Strategy to save the okapi

As part of a multi-partner conservation effort a 10-year global strategy to protect the okapi from extinction in the wild has been published. The elusive species is endemic to the Democratic Republic of the Congo, where it is rarely seen as it inhabits the inaccessible forests of the north-east (see also *Oryx*, 50, 134–137). It is categorized as Endangered on the IUCN Red List. The strategy calls for urgent government and international commitment to support the integrity of key protected areas for the species, which are under pressure from armed militia and illegal mining activity. A key element of the strategy will be the protection of the Okapi Wildlife Reserve, which has come under severe pressure from an influx of thousands of illegal gold miners despite its World Heritage Site status. In 2012 a brutal attack on the headquarters of the Reserve resulted in the deaths of seven people and all 14 okapi housed there.

Source: *IUCN* (2016) iucnredlist.org/news/global-plan-aims-to-save-elusive-okapi-from-extinction

The future of Madagascar's forests depends on conservation of lemurs

The decline and extinction of lemur species in Madagascar has serious implications for the island's unique forest ecosystems. Many of Madagascar's plants have lost their primary means of propagation in the past few centuries, with the loss of 17 species of fruit-eating lemurs. The loss of the big lemurs, such as the koala, sloth and monkey lemurs, has left behind orphan tree species that depended on the lemurs to disperse their seeds. Some large-seeded trees are believed to be doomed, with many others depending on the two largest surviving lemur species, the black-and-white ruffed lemur and the red-ruffed lemur, both of which are Critically Endangered and have lost more than 80% of their population in the past 3 decades. The threatened trees include most of the 33 species of *Canarium* hardwoods that dominate the island's forests. Conservation of Madagascar's remaining lemurs is therefore vital to prevent a cascade of extinctions.

Source: *Proceedings of the National Academy of Sciences of the United States of America* (2016) dx.doi.org/10.1073/pnas.1523825113, & *New Scientist* (2016) newscientist.com/article/2083800-lemur-extinctions-in-madagascar-leave-behind-doomed-orphan-trees/

SOUTH AND SOUTH-EAST ASIA

Sustainable trade in India's medicinal and aromatic plants

A group of stakeholders in India's medicinal and aromatic plant trade attended a 1-day workshop in New Delhi on Sustainable Trade, Standards and Certification Schemes in Medicinal and Aromatic Plants in India, focused on FairWild, a standard for sustainable harvesting of wild plants. India is the second largest exporter of medicinal and aromatic plants, after China, and many species are threatened locally and globally by overharvesting for trade. Wild harvesting is an important livelihood activity in rural communities, and underpins local and traditional healthcare practices, but wild plant populations are declining. Globally an estimated 1 in 5 plant species are considered to be threatened with extinction in the wild. Stakeholders agree that the implementation of sustainable practices is necessary to secure the future of plants and the livelihoods that depend on them, and there is increasing interest in sustainable and fair trade products in India's urban centres.

Source: *TRAFFIC* (2016) traffic.org/home/2016/3/29/stakeholders-meet-to-formulate-sustainable-practices-in-india.html

Capacity building for wildlife law enforcement in India

Representatives of various wildlife law enforcement agencies from across India gathered in the southern state of Tamil Nadu in February for the country's first national workshop on capacity building for combating wildlife crime. The 3-day workshop was attended by c. 100 delegates representing departments of forests, police and intelligence, as well as seven central agencies, who received training to enhance their knowledge and skills to tackle poaching and the illegal wildlife trade, which are significant threats to India's wildlife. Some of the country's most iconic species, including tigers, elephants, rhinoceros, leopards and pangolins, face the risk of extinction as demand for their body parts and derivatives increases. The workshop covered a broad range of topics, including strategies for combating crime, the use of forensics and DNA techniques in wildlife crime investigations, identification of specimens in trade, patrolling and surveillance methods, and collection and collation of intelligence.

Source: *TRAFFIC* (2016) traffic.org/home/2016/2/4/india-holds-first-national-workshop-on-capacity-building-for.html

First Red List assessment of Nepal's birds published

The Zoological Society of London has published a six-volume book, *The Status of Nepal's Birds: The National Red List Series*, featuring the first assessment of Nepal's birds based on IUCN Red List criteria. The book is the result of a study undertaken to assess the national conservation status of Nepal's birds and identify species threatened with extinction. It is estimated that almost 20% of the country's birds could soon be lost, including 37 globally threatened species. The most threatened group of birds in Nepal are the lowland grassland specialists, followed by wetland birds, and birds that inhabit tropical and subtropical broad-leaved forests. A number of globally threatened species have important populations in Nepal and are of particular conservation concern: cheer pheasant, swamp francolin, Bengal florican, red-headed vulture, white-rumped vulture, grey-crowned prinia and slender-billed babbler. The book contains detailed accounts of more than 800 species, and distribution maps, and is freely available online.

Source: *BirdLife International* (2016) birdlife.org/asia/news/national-red-list-book-nepals

birds-published-and-online, & ZSL (2016) zsl.org/conservation/regions/asia/national-red-list-of-nepals-birds

Large population of rare monkeys discovered in Vietnam

Researchers from Fauna & Flora International recently discovered a population of at least 500 grey-shanked doucs *Pygathrix cinerea* during a field survey in Kon Tum Province, Vietnam. This is a significant boost to the known global population of this Critically Endangered primate, which was previously thought to comprise c. 800–1,000 individuals. The species is found only in Vietnam, where it is restricted to the forests of the central highlands, and it is considered to be one of the 25 most threatened primates. The main threats to the grey-shanked douc are deforestation, habitat fragmentation and hunting. Doucs are targeted for the illegal wildlife trade and are hunted for bushmeat, traditional medicine and the pet trade. Although this latest discovery offers some hope for the species, its long-term survival will depend upon the combined efforts of government, local communities, civil society, researchers, and donors.

Source: *Fauna & Flora International* (2016) fauna-flora.org/news/rare-monkeys-found-in-forests-of-vietnams-central-highlands/

Hope for tigers as numbers rise...

The number of tigers in the wild is estimated to have increased by 700 since the last estimate was made 5 years ago, marking the first recorded population increase since conservation efforts for the species began. The global population is now estimated to be 3,900. In other good news a study has found that there is sufficient intact forest habitat to accommodate a doubling of the global tiger population. The 13 countries within the tiger's range are working towards a goal of doubling tiger numbers by 2022, by consolidating their conservation efforts and strengthening anti-poaching measures. The current increase in numbers is attributed to conservation successes in India, Russia and Nepal. Meanwhile, Cambodia, where the species is considered functionally extinct, has announced it will start a reintroduction programme. Poaching remains a huge threat to tigers, with official data indicating that law enforcement officials seized parts from 1,590 tigers during 2000–2014.

Source: *New Scientist* (2016) newscientist.com/article/2083825-tiger-numbers-in-the-wild-rise-for-the-first-time-in-100-years/

...tiger range countries adopt new resolution for conservation...

The 13 tiger range countries have reaffirmed their commitment to the goal of doubling tiger numbers by 2022, by adopting the New Delhi Resolution on Tiger Conservation at the 3rd Asia Ministerial Conference on Tiger Conservation. Under the Resolution the countries have committed to accelerating the implementation of the Global and National Tiger Recovery Programmes; aligning economic development with tiger conservation; securing global and national funding and technical support for conservation efforts; recognizing the importance of tiger habitats in terms of ecosystem services and climate change; emphasizing the recovery of tiger populations in areas where tiger population densities are low; strengthening intergovernmental cooperation at the highest levels; and increasing knowledge-sharing and the use of technology. The Resolution sets out a roadmap for the next 6 years towards reaching the 2022 goal, and recognizes the Global Tiger Forum and the Global Tiger Initiative Council as the coordinating bodies for conservation activities.

Source: *TRAFFIC* (2016) traffic.org/home/2016/4/15/tiger-resolution-sets-new-paradigm-for-conservation.html

...but there remains concern for Malaysia's wild tigers

The Malaysian Conservation Alliance for Tigers (MYCAT) has raised concerns over the protection of wild Malayan tigers. Earlier this year two wild tigers were seized from illegal traders, a third was rescued from a snare, and a female, pregnant with two cubs, was killed on a major highway. Malaysia has only 250–340 wild tigers, compared with an estimated population of 500 over a decade ago, yet tiger traffickers consistently receive lenient sentences. In the country's biggest tiger trafficking case a man caught with eight tiger skins and 22 bags of tiger bones was sentenced to 12 months in prison and a fine of MYR 200,000 (c. USD 50,000), despite the law allowing for stiffer penalties. MYCAT has launched an online petition (bit.do/mycatpetition) calling for the full implementation of Malaysia's laws to deter poaching and trafficking, particularly of wild tigers. The alliance hopes to gather 100,000 signatures by Global Tiger Day on 29 July.

Source: *TRAFFIC* (2016) traffic.org/home/2016/3/1/concern-raised-over-protection-of-malaysias-wild-tigers.html

Malaysian reptile smugglers arrested in Jakarta

Two Malaysian men were arrested in Jakarta's Soekarno-Hatta International Airport in April while attempting to smuggle 23 reptiles and amphibians aboard a flight to Kuala Lumpur. The illicit cargo was discovered during X-ray scans of the men's luggage, and further inspection revealed that the bags contained seven pythons, seven lizards and nine frogs. Indonesia has a rich diversity of reptiles and amphibians and remains a major target for criminals involved in the illegal wildlife trade, as international demand for the pet trade remains high and is a significant threat to Indonesia's wildlife. Enforcement efforts must be maintained, and the wildlife trade monitoring network TRAFFIC has called on Indonesia and Malaysia to work closely together to tackle illegal smuggling of wildlife for the pet trade between the two countries.

Source: *TRAFFIC* (2016) traffic.org/home/2016/4/4/malaysians-arrested-in-jakarta-with-bags-full-of-reptiles.html

Malaysia destroys ivory hoard to deter smugglers

In its first ever destruction of seized ivory, Malaysia destroyed 9.5 t of elephant ivory in April, in a bid to deter smugglers who use the country as a key transit point in the illegal trade. In response to the stark decline in the population of African elephants, from millions in the mid 20th century to just 600,000 by the end of the 1980s, the international trade in ivory was outlawed, with rare exceptions, in 1989. However, demand remains high in Asia, and particularly China, where ivory is sought after for medicinal and decorative purposes, and poachers and smugglers continue to exploit this demand. Malaysia is a signatory to CITES and has made a number of important confiscations of ivory smuggled by sea or aboard commercial flights. During 2011–2014 Malaysian authorities confiscated 4,624 ivory tusks, according to an announcement in parliament.

Source: *The Guardian* (2016) theguardian.com/environment/2016/apr/14/malaysia-destroys-95-tonne-hoard-of-ivory

Census more than doubles the estimate of Sumatra's orang-utan population...

According to recent survey data there are > 14,600 orang-utans inhabiting the forests of the Indonesian island of Sumatra, which is more than double the previous estimate of 6,600. The survey team searched in

places that had not been surveyed previously because of the effort and cost involved, including in logged forests and forests at higher elevations, and in a remote area west of Lake Toba. The Sumatran orangutan *Pongo abelli* is Critically Endangered, and the increased population estimate is good news because it suggests the species is adaptable and can persist in areas where there is some timber harvesting. Conservationists have warned against undue optimism, however, as the species is still declining as its habitat is destroyed for the development of oil palm plantations, mining and roads.

Source: *New Scientist* (2016) newscientist.com/article/2079620-orangutan-population-in-sumatra-more-than-doubles-after-census/

..but Sumatran rhinoceros sighted in the wild in Indonesian Borneo has died

A female Sumatran rhinoceros *Dicerorhinus sumatrensis* captured in the wild in Indonesian Borneo, marking the first physical contact conservationists have made with an individual of the species in the wild for over 4 decades, has died, possibly as a result of infection caused by a previous poaching attempt. The Sumatran rhinoceros is the smallest of the three Asian rhinoceros species, and there are thought to be fewer than 100 individuals remaining. Once widespread from northern India to southern China the species has been decimated by hunting and habitat loss, and was declared extinct in the wild in Malaysia last year. The rhinoceros's remote, dense rainforest habitat make sightings difficult, but 15 other individuals have been identified in Kalimantan by camera trapping. A male Sumatran rhinoceros was translocated from Cincinnati zoo to Sumatra last year to boost the breeding potential of the remaining population.

Source: *The Guardian* (2016) theguardian.com/environment/2016/mar/22/rare-sumatran-rhinoceros-sighted-in-the-wild-for-the-first-time-in-40-years

Is the island of Bawean home to the world's rarest pigs?

A taxonomic review of South-east Asia's warty pigs has so far confirmed a dozen distinct species, and it is likely that others will emerge. One of these, the diminutive Bawean warty pig *Sus blouchi*, is endemic to the 192 km² Indonesian island of Bawean in the Java Sea. The first ecological study of the Bawean warty pig, a dwarf relative of the Javan warty pig *Sus verrucosus*, has estimated a population of 172–377 individuals on the island, based on records from camera traps placed at 100 locations in Bawean's protected forest areas, and these

data suggest the species may be the world's rarest pig. The researchers who carried out the study suggest that the species should be categorized as Endangered on the IUCN Red List. The Bawean warty pig is not protected under Indonesian law but much of the centre of its island home was declared protected in the 1930s.

Source: *PLoS ONE* (2016) dx.doi.org/10.1371/journal.pone.0151732, & *New Scientist* (2016) newscientist.com/article/2083311-bawean-warty-pig-may-be-worlds-rarest-pig-with-only-230-around/

EAST ASIA

Black-faced spoonbill shows signs of recovery

The latest annual International Black-faced Spoonbill Census, conducted in January by over 200 volunteers, recorded an increase of 2.6% on last year's numbers, with a count of 3,356 individuals across South Korea, Japan, mainland China, Taiwan, Hong Kong, Macau, Vietnam, the Philippines and Thailand. The signs of recovery of this Endangered species reflect conservation efforts over the past decade, in particular the protection of two major wintering sites in Taiwan, which is the largest wintering area for the species, and Hong Kong. Despite the good news overall there is concern about the species' decline in Deep Bay (Hong Kong and Shenzhen, China), at the heart of which the Important Bird Area Mai Po Nature Reserve is managed for waterbirds and wetland conservation. The area, which is also home to several other globally threatened and near-threatened waterbirds, is under pressure from water pollution, wetland reclamation for coastal development, and illegal poaching.

Source: *BirdLife International* (2016) birdlife.org/asia/news/record-black-faced-spoonbill-count-despite-deteriorating-habitat

China's tourism sector pledges zero tolerance of illegal wildlife trade...

On 3 March, World Wildlife Day, the China Tourism Administration and leading tourism companies and travel agencies publicly pledged zero tolerance towards illegal wildlife trade. There has been a steady increase in overseas travel by Chinese nationals in the past decade, and more frequent reports of smuggling of ivory and other wildlife products from Africa and South-east Asia by tourists of Chinese origin. In 2014 numbers of Chinese travellers to popular destinations in Africa exceeded 1.52 million, and the number of Chinese visitors to

South-east Asia increased to 17 million in 2015. Up to one-third of those suspected of wildlife crime claim to be ignorant of international trade controls on ivory and other wildlife products, and therefore the engagement of the tourism industry is of great importance in raising awareness of the legislation among tourists. China Tourism Administration has committed to making wildlife conservation a priority and strengthening governance of operations within the sector.

Source: *TRAFFIC* (2016) traffic.org/home/2016/3/3/tourism-industry-in-china-says-no-to-illegal-wildlife-trade.html

...but illegal trade in humphead wrasse continues on a large scale

Surveys of markets in Hong Kong and mainland China have revealed that illegal and unreported trade in the humphead wrasse is continuing on a large scale, despite the species having been listed in Appendix II of CITES in 2005. The large, naturally rare, and slow growing reef fish is usually traded live and is considered a delicacy in Hong Kong and mainland China. According to the official global database for trade in CITES-listed species, Indonesia and Malaysia are the main exporters of humphead wrasse, although Malaysia set its export quotas for all humphead wrasse to zero in 2015. Traders claim that significant numbers of the fish are also sourced from the Philippines, although only three live individuals are accounted for in the CITES trade data. The market surveys provided a clear indication of significant illegal trade at borders and in markets, highlighting an urgent need for improved patrolling and enforcement.

Source: *TRAFFIC* (2016) traffic.org/home/2016/3/17/new-study-highlights-scale-of-illegal-and-unreported-humphead.html

NORTH AMERICA

Earthworms invade North American forests

Native earthworms were wiped out from the northern USA and Canada during the last ice age but invading earthworms, mostly from Europe, are now threatening the region's forests. The worms can dramatically alter forest ecosystems and reduce biodiversity by interfering with microbial interactions, reducing leaf litter and altering soils. Although rodents are the main drivers of seed predation, a recent study has found that the worms also eat a lot of seeds, particularly of small-seeded species such as

birch, thus negatively impacting the regeneration of these plants. As it is almost impossible to eradicate earthworms once they have invaded a habitat, the researchers involved in the study recommend that conservationists focus their efforts on keeping the worms out of pristine habitats, for example by restricting the use of worms as fishing bait and introducing biosecurity measures for transported soil.

Source: *Biological Invasions* (2016) [dx.doi.org/10.1007/s10530-016-1101-x](https://doi.org/10.1007/s10530-016-1101-x), & *New Scientist* (2016) www.newscientist.com/article/2083338-invasive-earthworms-threaten-growth-of-new-north-american-trees/

First case of white-nose syndrome confirmed in western North America

The U.S. Geological Survey's National Wildlife Health Centre has confirmed the occurrence of the deadly fungal disease white-nose syndrome in a little brown bat in Washington State. The disease was first discovered 10 years ago and has since decimated bat populations in eastern North America, but this is the first recorded occurrence in western North America. Typified by a white fungus growing on the nose of bats, the disease has killed millions of bats during their hibernation, with a mortality rate of 99% in any given winter roost. This latest discovery is a cause of great concern, as bats are important to both the ecosystem and economy, providing essential pest control for the agriculture and timber sectors. To prevent the spread of fungal spores, cavers are advised to disinfect their gear before entering caves. The public are also urged to report any dead bats found in winter or spring to their local government biologist.

Source: WCS (2016) newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/8680/First-Western-Bat-Found-with-Deadly-White-Nose-Syndrome.aspx

Cities are surprise hotspots for bug diversity

The Natural History Museum of Los Angeles has launched an ambitious programme to search for hidden urban biodiversity, recruiting up to 1,000 citizen scientists to search urban sites such as backyards and school yards for new species of spiders, snails, slugs, reptiles and amphibians. Over the past 2 years an entomologist at the museum has discovered 43 new species among the 40,000 flies she trapped in 27 private gardens and three community gardens across the city. All of the new species are of the genus *Megaselia* and are named after the people in whose backyards they were discovered. Once considered to

be biological deserts, it turns out that urban landscapes are rich in biodiversity, much of it yet to be discovered within the many and various ecological niches created within cities.

Source: *New Scientist* (2016) [newscientist.com/article/2084421-los-angeles-launches-hunt-for-unknown-species-hiding-in-cities/](http://www.newscientist.com/article/2084421-los-angeles-launches-hunt-for-unknown-species-hiding-in-cities/)

Bison to return to the plains of Montana

Following a 2014 treaty between Native American tribes to restore bison to the grasslands and forests of the western United States, descendants of a herd captured and sent to Canada more than a century ago are to be relocated from Alberta's Elk Island national park to the Blackfoot reservation in Montana. Tribal leaders envision the 89 genetically pure plains bison will form the nucleus of a herd that will once again roam freely across the vast plains where millions once roamed. Bison are of spiritual and cultural significance to the tribes, providing food and clothing and sustaining their traditional way of life. Most bison are now in commercial herds, raised for their meat and interbred with cattle, but according to experts the Elk Island bison are free of cattle genes. They are also free from brucellosis, a disease that is of concern to ranchers and landowners near the reservations, who oppose the planned reintroduction.

Source: *The Guardian* (2016) theguardian.com/environment/2016/mar/28/bison-to-return-to-montana-after-140-years-in-the-canadian-wilderness

Bat audio library used to monitor biodiversity

An international team of researchers has compiled the largest known library of bat sounds, recording more than 4,500 calls from about half of Mexico's bat species. With 130 species, Mexico has among the highest bat species diversity. Audio surveys are increasingly used to monitor changes in biodiversity, and in the case of bats it is possible to characterize communities in different regions by tracking the sounds they use to explore their environment, and thereby assess the impacts of rapid environmental change. The bat calls were recorded using remote monitoring stations in the desert, jungle and tropical forests of Mexico, and voice-recognition software was developed that can recognize c. 70% of bat species from their calls. Bats account for c. one-fifth of all land mammals and play an important role in ecosystems, as pollinators and insect predators. Many are threatened

by habitat loss, and some species are hunted for bushmeat.

Source: *BBC News* (2016) bbc.co.uk/news/science-environment-36035968

SOUTH AMERICA

From one to three: new genera of titi monkeys...

A new molecular phylogenetic study has examined the evolutionary relationships of the 34 species of titi monkeys, a group of New World monkeys, previously all classified in the genus *Callicebus*, that occur from central Colombia through a large part of the Amazon into the Chaco of Bolivia and Paraguay and the Atlantic forest of Brazil. Four of the five species groups were found to correspond to distinct clades, the earliest lineage being that of the collared titi or widow monkeys (*torquatus* group) that emerged about 11 Ma ago. The Atlantic forest titi (*personatus* group) diverged from the remaining titi (*donacophilus* and *moloch/cupreus* groups) 9–8 Ma ago. The early separation and distinctive features of the *torquatus* and *personatus* lineages resulted in them being attributed new generic names: *Cheracebus* (= widow monkeys) and *Plecturocebus* (= tail-twining monkeys), respectively.

Source: *Frontiers in Zoology* (2016) [dx.doi.org/10.1186/s12983-016-0142-4](https://doi.org/10.1186/s12983-016-0142-4)

...and new genus of saddleback tamarin

Phylogenetic analyses have revealed that the saddleback and black-mantled tamarins (the white-mouthed tamarin group) of the upper Amazon diverged early from the tamarin radiation, in the Late Miocene 11–8 Ma ago. Smaller than all other tamarins, they show distinct foraging behaviour, focusing on concealed prey (as opposed to the foliage gleaning of cryptic prey of other tamarins) and locomotion (more vertical clinging and leaping in the understorey compared to other tamarins, which are runners and leapers in higher forest strata). Some are sympatric with moustached tamarins, travelling with them in mixed-species groups. Their distinctive characteristics and early individualization merit their recognition as a separate genus: *Leontocebus*, which means lion monkey. The name was attributed to a Colombian white-mouth tamarin in 1839 by a zoologist who was convinced it was related to the lion tamarins of Brazil's Atlantic forest.

Source: *Zoological Journal of the Linnean Society* (2016) [dx.doi.org/10.1111/zoj.12386](https://doi.org/10.1111/zoj.12386)

New sanctuary for sharks in the Galápagos

Ecuador has created a new marine sanctuary encompassing 38,000 km² of waters around the Galápagos Islands, to protect the world's greatest concentration of sharks. The seas around the northern islands of Darwin and Wolf, where small-scale local fishing cooperatives were previously allowed to operate, will be off-limits to all fishing. Sharks and their habitat are increasingly threatened by climate change, industrial trawlers, and illegal shark fin hunters. The waters of the Galápagos are home to 34 species of sharks, including the largest shark—the whale shark—as well as the migratory hammerhead shark and the Galápagos shark. Globally, shark populations are in decline, with an estimated 100 million killed annually, and it is hoped that the new marine sanctuary will support a breeding ground where sharks can grow to full size. With the designation of this sanctuary 32% of the waters of the Galápagos are now protected from fishing and other extractive industries.

Source: *The Guardian* (2016) theguardian.com/environment/2016/mar/21/ecuador-creates-galapagos-marine-sanctuary-to-protect-sharks

AUSTRALIA/ANTARCTICA/NEW ZEALAND

Court victory for regent honeyeater. . .

Approval for the development of a steel fabrication facility in the Lower Hunter Valley of New South Wales, Australia, has been overturned by the state's Land and Environment Court on the basis that the development would destroy the habitat of the Critically Endangered regent honeyeater. The court ruled that the approval by Cessnock City Council was invalid, as a Species Impact Statement had not been provided and there was no proper assessment of the impacts of clearing the land for development on the regent honeyeater. Habitat loss is one of the greatest threats to the species, which is thought to number as few as 350–400 individuals in the wild, and the Lower Hunter Valley is one of only four known core areas for the bird, as well as being home to a range of other threatened fauna, flora and ecological communities.

Source: *BirdLife International* (2016) birdlife.org/pacific/news/win-critically-endangered-australian-regent-honeyeater-court-decision

. . . and cassowary rehabilitation centre saved. . .

The Garners Beach Cassowary Rehabilitation Centre at Mission Beach in

Queensland, Australia, has been saved from closure and will be managed by the not-for-profit organization Rainforest Reserves Australia for the next 3 years. The state government provided emergency funding last year to keep the centre open when the previous operator, Rainforest Rescue, ran out of money. Cassowaries are iconic birds in northern Queensland, where they play an essential ecological role in maintaining the biodiversity of tropical rainforests by dispersing the seeds of forest plants. The rehabilitation centre cares for sick and injured birds, and orphaned chicks, before returning them to their rainforest habitat. Rainforest Reserves Australia plans to establish an additional facility at Lake Barrine in the Atherton Tablelands, in the wet tropical region in the far north of Queensland.

Source: *The Guardian* (2016) theguardian.com/environment/2016/mar/23/queensland-cassowary-rehabilitation-centre-saved

. . . but the Great Barrier Reef faces renewed threat from coal mining

The government of Queensland has approved the development of Australia's largest coal mine, issuing three licences to an Indian-based mining company. The planned development includes the expansion of the port at Abbot Point, adjacent to the Great Barrier Reef, to facilitate the export of coal to India. This could result in the release of plumes of soil and debris over the reef, with significant damage to the ecosystem. The move has been criticized by environmental groups, who claim that the mining and eventual burning of the coal will exacerbate climate change by generating huge amounts of carbon dioxide, and cause irreparable damage to the Great Barrier Reef, which is a UN World Heritage Site. The Australian Conservation Foundation is challenging the legality of previous federal approval for the mine, on the basis that the federal environment minister failed to comply with Australia's international obligations to protect the Great Barrier Reef.

Source: *New Scientist* (2016) newscientist.com/article/2083116-anger-as-coal-mine-that-could-damage-great-barrier-reef-approved/

New species of fat-tailed gecko discovered

Australian herpetologists have described a new species of fat-tailed gecko, named *Diplodactylus ameyi* in honour of Dr

Andrew Amey, who manages the reptile and amphibian collections at Queensland Museum. The gecko's colouring—tan to medium-dark brown, with pale spots—helps it to blend in with its surroundings in its dry, arid habitat in the outback of Queensland and northern New South Wales. The gecko, a specialized termite predator, can grow up to 85 mm in length and has a broad, rounded snout, which closely resembles its tail. Like many other terrestrial gecko species it takes shelter in unused spider burrows during the daytime.

Source: *Zootaxa* (2016) dx.doi.org/10.11646/zootaxa.4093.4.4, & *Mongabay.com* (2016) news.mongabay.com/2016/04/new-termite-eating-fat-tailed-gecko-found-australia/

Strategic plan for New Zealand's nature

New Zealand's oldest conservation organization, Forest & Bird, has launched an ambitious strategy to protect and restore the country's nature and place ecological resilience at the heart of communities. Key elements of the strategy include reducing greenhouse gas emissions, building resilience in ecosystems and promoting a sustainable economy that enhances biodiversity. The strategy also aims to expand New Zealand's network of marine protected areas, acknowledging that protection of the marine environment currently lags behind that of the terrestrial environment. In a step towards meeting this target the Government has agreed to establish a 620,000 km² marine sanctuary around the Kermadec Islands. Forest & Bird has identified Important Bird and Biodiversity Areas for marine and coastal birds and is now working to identify such areas for terrestrial birds.

Source: *BirdLife International* (2016) birdlife.org/pacific/news/forest-bird-launches-ambitious-strategy-new-zealands-nature

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