

# Briefly

## INTERNATIONAL

### Is the yellow-breasted bunting going the way of the passenger pigeon?

The yellow-breasted bunting, which was once widely distributed across Europe and Asia and was one of Eurasia's most abundant bird species, has declined by 90% since 1980. This mirrors the decline of the passenger pigeon, which went extinct in 1914 as a result of industrial-scale hunting. Hunting is also implicated in the decline of the yellow-breasted bunting, which is an easy target during migration and overwintering, when birds roost in huge flocks at night. The species has been virtually wiped out in Eastern Europe, European Russia, large areas of western and central Siberia, and Japan. Meanwhile in China consumption increased following economic growth, and millions of the birds were being killed and sold on the black market as late as 2013, despite the hunting ban introduced in 1997 in response to the species' decline.

Source: *BirdLife International* (2015)

[birdlife.org/asia/news/superabundant-bird-decline-mirrors-passenger-pigeon](http://birdlife.org/asia/news/superabundant-bird-decline-mirrors-passenger-pigeon)

### New strategic plan for wetlands conservation

The Ramsar Convention has adopted a new strategic plan to guide conservation efforts for wetlands during 2016–2024. The plan was agreed at the 12th meeting of the Conference of the Parties to the Ramsar Convention on Wetlands, which took place in Punta del Este, Uruguay, during 2–9 June 2015, and it encompasses a range of issues, including restoration of wetlands, sustainable approaches to fisheries and agriculture in wetlands and the designation of Ramsar sites. The conference emphasized the importance of investment in sustainability to bring about water and food security, disaster risk reduction and resilience to climate change, and called for countries to adopt nature-based solutions for mitigating the risk of natural disasters and to protect peatlands, which play a key role in climate change mitigation and adaptation. Currently 68 sites identified as both Ramsar sites and Important Bird and Biodiversity Areas are considered at immediate risk of being lost.

Source: *BirdLife International* (2015)

[birdlife.org/worldwide/news/conservation-should-not-be-seen-burden](http://birdlife.org/worldwide/news/conservation-should-not-be-seen-burden)

### Conservation action is making a difference...

A study carried out by IUCN has found that conservation actions have greatly benefited ungulate species. The finding shows that of the 235 recognized species, at least 148 would have been uplisted by at least one category of threat on the IUCN Red List had conservation actions not taken place, and six of these would now be categorized as Extinct or Extinct in the Wild. Highly targeted conservation actions involving captive breeding, reintroductions and management are thought to have saved a number of species, such as the Arabian oryx *Oryx leucoryx* and Przewalski's horse *Equus ferus*, which would otherwise probably have gone extinct in the wild. The majority of the species studied benefited from landscape-scale conservation measures such as habitat protection and protected area management. The study compared the conservation status of species in 2008 with their estimated status under the hypothetical scenario that all conservation efforts were halted in 1996.

Source: *Conservation Biology* (2015) [dx.doi.org/10.1111/cobi.12519](https://doi.org/10.1111/cobi.12519)

### ...but update of IUCN Red List shows many species need urgent attention...

The latest update of the IUCN Red List shows evidence of success of conservation measures for some species, but others are facing increasing threats to their survival. The Red List now includes 77,340 assessed species, with 22,784 of these threatened with extinction. Although no new species have been categorized as Extinct since the last update, 14 have been categorized as Critically Endangered (Possibly Extinct), including *Magnolia emarginata*, an evergreen tree endemic to Haiti, and 10 of Madagascar's endemic orchid species. Several mammal species have been uplisted, including the African golden cat *Caracal aurata* and the New Zealand sea lion *Phocarctos hookeri*. Improvements in the conservation status of some species have been recorded. Notably, the population of Iberian lynx *Lynx pardinus* increased from 52 in 2002 to 156 in 2012 in response to intense conservation efforts, and the Guadalupe fur seal *Arctocephalus townsendi* was downlisted from Near Threatened to Least Concern.

Source: *IUCN* (2015) [iucn.org/news\\_home-page/?21561/Conservation-successes-](http://iucn.org/news_home-page/?21561/Conservation-successes-)

### overshadowed-by-more-species-declines--IUCN-Red-List-update

### ...and the 6th Extinction is real

The IUCN Red List identifies fewer than 1,000 extinct species, a trivial number compared to the millions of species known and a statistic used by some to deny there is a biodiversity crisis. The number is based on accurate data but only mammals and birds have been comprehensively evaluated, with the vast majority of biodiversity—invertebrates—not evaluated. A multidisciplinary team has now sought to assess more accurately the magnitude of the Sixth Extinction by focusing on invertebrates. They asked 35 experts to assess the status of a random sample of terrestrial molluscs. Independently, they used bibliographical and collection data to build a mathematical model to assess the probability of extinction of each species in the sample. The results of both approaches were remarkably consistent. Extrapolated to all known terrestrial biodiversity, they estimated that not 1.3% but 7% of species, c. 130,000, are already extinct.

Source: *Proceedings of the National Academy of Sciences of the United States of America* (2015) [dx.doi.org/10.1073/pnas.1502350112](https://doi.org/10.1073/pnas.1502350112)

### Legal protection for the high seas is another step closer

UN Member States have formally adopted a resolution to develop a legally binding agreement for conservation and management of marine biodiversity in the high seas. The high seas refer to the vast areas of the world's oceans that lie beyond the jurisdiction of any nation; they cover almost 50% of the planet and are the largest habitat on Earth. Currently < 1% of the high seas is protected, and threats to the oceans include illegal fishing, overfishing, pollution and habitat destruction. The new international agreement will aim to support and build on the implementation of the UN Convention on the Law of the Sea, facilitating the designation of marine protected areas in the high seas and improving environmental impact assessments. Its final form has yet to be decided, but by the end of 2017 the UN General Assembly is expected to have made a decision on establishing an intergovernmental negotiating conference.

Source: IUCN (2015) [iucn.org/news\\_home-page/?21553/A-major-step-towards-a-legally-binding-deal-for-the-high-seas](http://iucn.org/news_home-page/?21553/A-major-step-towards-a-legally-binding-deal-for-the-high-seas)

### World Heritage sites threatened by climate change...

The first global assessment of natural World Heritage sites warns that climate change may become the most widespread threat to these sites, with 35 of the 229 designated sites already suffering the impact of climate change. Marine and coastal sites are particularly threatened, with the effects of sea level rise, ocean acidification and extreme weather events already evident. Warmer waters are causing coral bleaching in Australia's Great Barrier Reef, and acidification is having a negative impact on corals. Communities in East Rennell, in the Solomon Islands, are experiencing food shortages and a reduction in their freshwater supply as the salinity of Lake Tegano increases because of sea level rise. Dams have been identified as another major threat to World Heritage sites, the effects of which may be experienced beyond national borders; e.g., three proposed dams in Mongolia pose a threat to Lake Baikal in Russia.

Source: IUCN (2015) [iucn.org/news\\_home-page/?21573/Climate-change-and-dams-threaten-natural-World-Heritage-warns-IUCN](http://iucn.org/news_home-page/?21573/Climate-change-and-dams-threaten-natural-World-Heritage-warns-IUCN)

### ...as are ocean habitats...

A number of recent studies on the effects of climate change on various marine animals, including corals and fishes, indicate that ocean habitats may shrink by up to 20%, as existing habitats become less habitable or uninhabitable. As tropical waters become hotter, corals are expected to move northwards and southwards into water that was once too cold. However, as they move further from the equator they will be confined to shallower water because the symbiotic algae that live in their tissues require light for photosynthesis. They will thus be at greater risk of damage from strong waves or environmental conditions being sometimes too warm or too salty. Fish in the North Sea are likely to be harmed by lower levels of oxygen in warmer waters, compounded by their increased need for oxygen as their metabolism speeds up in warmer conditions.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aac6792](https://doi.org/10.1126/science.aac6792)

### ...and freshwater fish...

Ocean acidification is known to have a negative effect on many marine species,

and widespread changes in marine ecosystems as a result of climate change are predicted. Less attention has been given to potential effects on freshwater ecosystems, but a study of pink salmon *Oncorhynchus gorbuscha* has found that salmon reared in freshwater rich in CO<sub>2</sub> are smaller and less fearful of predators, and have significantly altered olfactory responses, which may affect their ability to navigate back to the streams where they hatched. If greenhouse gas emissions continue to rise the salmon may face increasing challenges to their survival. Small juveniles are less likely to survive, and increased fearlessness will leave them more vulnerable to predation. Salmon are of significant ecosystem, economical and cultural importance, and these findings highlight the need for more research into the effects of acidification on freshwater fish, which account for 40% of all fish species.

Source: *Nature Climate Change* (2015) [dx.doi.org/10.1038/nclimate2694](https://doi.org/10.1038/nclimate2694) & *Science* (2015) [dx.doi.org/10.1126/science.aac6913](https://doi.org/10.1126/science.aac6913)

### ...and CO<sub>2</sub> emissions threaten an ocean crisis

Scientists have warned that marine life will be irreversibly changed unless CO<sub>2</sub> emissions are drastically cut. The oceans are heating, losing oxygen and becoming more acidic because of CO<sub>2</sub>, and the 2 °C maximum temperature rise for climate change agreed by governments will not prevent dramatic impacts on ocean systems. The ocean has absorbed nearly 30% of the CO<sub>2</sub> produced since 1750 and, as CO<sub>2</sub> is a mildly acidic gas, seawater is becoming more acidic. The ocean has also buffered climate change by absorbing > 90% of the additional heat created by industrial society since 1970, making it harder for the ocean to hold oxygen. Ocean acidification is likely to affect reproduction, larval survival and feeding, and growth rates of marine organisms, especially those with calcium carbonate shells or skeletons. Coastal protection, fisheries, aquaculture and human health and tourism will all be affected by the changes.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aac4722](https://doi.org/10.1126/science.aac4722) & *BBC News* (2015) [bbc.co.uk/news/science-environment-33369024](http://bbc.co.uk/news/science-environment-33369024)

### Shining too much light on marine protected areas

Natural light patterns shape many marine ecosystems, guiding the behaviour of species, including zooplankton. However, oceans have become increasingly exposed to artificial light from maritime vessels, oil

rigs and coastal developments, which is likely to change species' behaviour and alter ecosystems. Researchers used satellite images to quantify night-time artificial light across marine protected areas globally and found that light pollution was widespread and increasing in a large proportion of these areas. Increases in artificial light were found to be most common in marine protected areas where there is human activity but even areas with the highest levels of legal protection are also being affected. The researchers propose the establishment of a 'marine dark sky park' designation, similar to the initiative of the International Dark-Sky Association for terrestrial parks, and the avoidance of blue lighting, which penetrates deeper into seawater.

Source: *Conservation Letters* (2015) [dx.doi.org/10.1111/conl.12191](https://doi.org/10.1111/conl.12191) & *Science* (2015) [dx.doi.org/10.1126/science.aac6904](https://doi.org/10.1126/science.aac6904)

## EUROPE

### European Union becomes full member of CITES

Since the introduction of common EU Wildlife Trade Regulations in 1984 efforts have continued to ensure consistent implementation of CITES across all EU Member States. The latest milestone in this endeavour is the accession of the EU as a single Party to CITES, signalling the EU's commitment to curbing illegal wildlife trade as it moves towards the implementation of an Action Plan on Wildlife Crime. The EU is one of the most important consumer markets for products derived from wild animals and plants, including CITES-listed timber, fish and animal products, for which the value of imports is estimated to be EUR 25 billion, 18.6 billion and 499 billion, respectively. It is hoped that accession to CITES will increase the EU's effectiveness in addressing the illegal wildlife trade, and enhance the technical and financial support it provides for this purpose.

Source: *TRAFFIC* (2015) [traffic.org/home/2015/7/8/eu-sets-precedent-first-reio-to-join-cites.html](http://traffic.org/home/2015/7/8/eu-sets-precedent-first-reio-to-join-cites.html)

### New era for bird conservation in Europe...

The EU-funded Euro SAP project represents a continent-wide partnership for the conservation of 16 of Europe's most threatened bird species. Species action plans will incorporate comprehensive information about the species' ecology and conservation status, and the threats to their survival, and will outline key conservation

actions needed. Existing action plans will be revised for the velvet scoter, white-headed duck, cinereous vulture, bearded vulture, Dalmatian pelican and European turtle dove, and conservation strategies will be developed for the first time for the Yelkouan shearwater and Monteiro's storm-petrel, which is categorized as Vulnerable on the IUCN Red List; both species face a number of threats, including predation, fishing activity and other forms of human disturbance. A multi-species action plan will be created for eight wader species threatened by loss and degradation of their grassland habitats: the Eurasian oystercatcher, European lapwing, Baltic dunlin, ruff, common snipe, Eurasian curlew, black-tailed godwit and common redshank.

Source: *BirdLife International* (2015) [birdlife.org/europe-and-central-asia/news/europes-most-ambitious-conservation-project](http://birdlife.org/europe-and-central-asia/news/europes-most-ambitious-conservation-project)

### ... but new European Red List of Birds presents further challenges ...

BirdLife International has introduced the European Red List of Birds, which is the culmination of years of work by many people with an interest in preserving Europe's birds, including scientists, conservationists and policy makers. According to the List 67 species (13%) are threatened at the European level; 10 of these are categorized as Critically Endangered, 18 as Endangered and 39 as Vulnerable. The primary threats to Europe's birds are identified as illegal killing and land-use change, particularly on farmland; climate change, pollution and invasive species are also serious threats. Since the last regional assessment in 2004 29 species have been uplisted, including the European turtle dove, Eurasian oystercatcher and Atlantic puffin. However, the conservation status of some species has improved in response to conservation action and legal protection; species that have made a comeback include the dalmatian pelican, lesser kestrel, Arctic loon and great bustard.

Source: *BirdLife International* (2015) [birdlife.org/europe-and-central-asia/news/european-red-list-birds-here](http://birdlife.org/europe-and-central-asia/news/european-red-list-birds-here)

### ... and assessment of Europe's marine fishes highlights significant threat from overfishing

The IUCN European Red List of Threatened Species includes the first complete assessment of Europe's native marine fishes, which comprise 1,220 species. According to the assessment 7.5% of all European marine fish species are threatened with extinction in European waters,

with the highest number of threatened species in the Mediterranean Sea, along the western coast of the Iberian Peninsula and around the Macaronesian islands. Many commercial fishes are at risk, in particular sharks, rays and chimaeras, of which 40.4% are threatened with extinction and 39.7% are in decline. Existing marine management measures have been successful for some species, such as Atlantic cod *Gadus morhua* and Atlantic bluefin tuna *Thunnus thynnus*, but less so for others, including Atlantic halibut *Hippoglossus hippoglossus*, Atlantic salmon *Salmo salar* and turbot *Scophthalmus maximus*. Overfishing has been identified as the main threat to Europe's marine fishes; other threats include coastal development, pollution and climate change.

Source: *IUCN* (2015) [iucn.org/news\\_homepage/?21428/First-complete-assessment-of-European-marine-fishes-highlights-major-threat-from-overfishing](http://iucn.org/news_homepage/?21428/First-complete-assessment-of-European-marine-fishes-highlights-major-threat-from-overfishing)

### Decline in Europe's medicinal plants

The first assessment of all European native plants used for medicinal purposes has been carried out for the IUCN European Red List of Medicinal Plants. Four hundred vascular plants were assessed, including trees, aquatic plants and epiphytes. Among them were the common and widely used arnica *Arnica montana*, St John's wort *Hypericum perforatum*, rosemary *Rosmarinus officinalis* and common heather *Calluna vulgaris*. Although the percentage of species threatened with extinction is relatively low, populations of almost one third of species were found to be in decline, with only 3% of species found to be increasing in population size. Population trends remain unknown for 25% of species. One of the main threats to medicinal plants in Europe is harvesting of plants from the wild for the ornamental and horticultural plant trade and for medicinal use. Other significant threats include loss of habitat as a result of urban development, and agricultural activity.

Source: *IUCN* (2015) [iucn.org/news\\_homepage/?21354/Europes-medicinal-plants-in-decline-2-percent-threatened-with-extinction--IUCN-report](http://iucn.org/news_homepage/?21354/Europes-medicinal-plants-in-decline-2-percent-threatened-with-extinction--IUCN-report)

### Natura 2000 network vital to protect seabirds in the face of climate change

Seabirds are particularly vulnerable to the effects of climate change, as marine food webs are altered by ocean warming and acidification, and extreme weather events make it difficult for seabirds to catch fish. The Atlantic puffin is now categorized as Endangered in Europe, and Scotland has

lost millions of breeding seabirds in the past 25 years, including 80% of its Arctic skuas, 72% of its Arctic terns, and 68% of its black-legged and red-legged kittiwakes. The Natura 2000 network, Europe's largest network of protected areas, if well managed and expanded to include more offshore marine sites for seabirds could offer protection to seabird populations in their key breeding and foraging areas, but there is concern at the slow pace of action to designate such sites, and the threat to the EU Birds and Habitats Directives, which are currently under review.

Source: *BirdLife International* (2015) [birdlife.org/europe-and-central-asia/news/natura-2000-haven-seabirds-simmering-seas](http://birdlife.org/europe-and-central-asia/news/natura-2000-haven-seabirds-simmering-seas)

### Bee highway gives threatened pollinators safe passage through Oslo

A project is underway in Oslo to create a bee highway through the city to protect urban bees. State bodies, companies, environmental groups and individuals are collaborating to create floral feeding stations throughout the city, planting sunflowers, marigolds and other nectar-bearing flowers. One third of Norway's 200 wild bee species are considered threatened, although the threats from agriculture and pesticides are less in Norway than in other European countries and the USA. Initiatives to protect bees are of vital importance, as 30–40% of global food production depends on pollination, and this free service provided by pollinating insects has been estimated to be worth more than USD 100 billion. The effects of the decline in bee populations are already evident: in China's Sichuan province farmers have had to resort to pollinating plants by hand, and some farmers in the USA have to rent hives to pollinate their crops.

Source: *The Guardian* (2015) [theguardian.com/environment/2015/jun/25/oslo-creates-worlds-first-highway-to-protect-endangered-bees](http://theguardian.com/environment/2015/jun/25/oslo-creates-worlds-first-highway-to-protect-endangered-bees)

### Greater protection needed for seagrass meadows

Scientists have called for more protection for seagrass beds around the coast of the UK, after monitoring off the North Wales coast revealed the ecosystem had been degraded by damage to seagrass by boat moorings, anchors and the movement of vehicles at low tide. In areas where the seagrass had been degraded and there was low cover the diversity of fish species and invertebrates, such as prawns, shrimp, and juvenile cod and plaice, was reduced threefold. Seagrass meadows act as nursery grounds for juvenile fish, and they are also

found in several marine conservation zones off the coast of England. The seagrass studied is in a designated Special Area of Conservation, which is protected under the European Habitats Directive, yet it is still being degraded, indicating the need for further protection measures for this fragile ecosystem.

Source: *BBC News* (2015) [bbc.co.uk/news/science-environment-33244000](http://bbc.co.uk/news/science-environment-33244000)

### Good news for rare spider . . .

A proposed housing development at Radford Quarry, a County Wildlife Site in Plymouth, in the south of England, has been rejected by the Planning Inspector because of the presence of rare wildlife at the site. The Critically Endangered and unfortunately named Horrid ground weaver *Nothophantes horridus*, a tiny money spider, has only ever been found at three sites in Plymouth, one of which has already been destroyed and built upon. A planning inquiry took place in January and March, after the applicant appealed Plymouth City Council's refusal to approve the project. The NGO Buglife had objected to the proposed development, which would have pushed the spider closer to extinction, and their petition to save the spider received more than 9,700 signatures. The spider has been added to the latest version of the IUCN Red List of Threatened Species.

Source: *BBC News* (2015) [bbc.co.uk/news/uk-england-devon-33068414](http://bbc.co.uk/news/uk-england-devon-33068414)

### . . . conservation success as the bittern booms again . . .

The bittern was on the brink of extinction in the UK in 1997, having previously been absent as a breeding bird between the 1870s and 1911. A conservation programme was established to prevent the bittern from going extinct for a second time, with efforts focused on restoration and management of the bird's reed-bed habitat, which was drying out. Now scientists have recorded more than 150 males across England and Wales, identifiable by their distinctive booming song, and 59% of these were in Natura 2000 sites, protected under international law. The East Anglia region is a stronghold for the birds, both at traditional sites as well as in newly created wetlands, such as Lakenheath in Suffolk and Ouse Fen in Cambridgeshire, which were previously carrot fields and a sand and gravel quarry, respectively. Bitterns are also booming in Somerset, where more than 40 males have been recorded across a number of new and restored wetlands.

Source: *The Guardian* (2015) [theguardian.com/environment/2015/jun/](http://theguardian.com/environment/2015/jun/)

### 18/bittern-conservation-programme-flying-high-birds-boom-again

### . . . and England's wild beaver colony has kits

A female from the first wild beaver colony in England for centuries has given birth to at least two young. Two females were found to be pregnant when they were taken into captivity to be tested for disease. It is not thought that the other female has yet had her kits. The colony of wild beavers was first spotted living on the River Otter in Devon in February 2014. In January 2015 Natural England granted a licence to the Devon Wildlife Trust that allowed the beavers to remain on the river as part of a pilot experiment. Beavers were hunted to extinction in England and Wales for their valuable fur and glandular oil during the 12th Century and disappeared from the rest of the UK 400 years later.

Source: *BBC News* (2015) [bbc.co.uk/news/science-environment-33247511](http://bbc.co.uk/news/science-environment-33247511)

### Dublin Bay designated a UNESCO biosphere reserve

UNESCO has designated Dublin Bay a biosphere reserve in recognition of the area's biological diversity and unique ecology. The bay area is home to a diverse range of mammals, birds, insects and rare plants; species found there include the Brent goose, harbour porpoise, little tern, bird's foot, liverwort, and green-winged and bee orchids. The area lies on the Atlantic flyway, and large numbers of migratory birds arrive each year from the Arctic, Greenland, Canada, Iceland, Russia and Africa, to feed and in some cases to breed. The purpose of a biosphere reserve is to protect ecosystems while promoting local development in harmony with nature; to fulfil this purpose the 300 km<sup>2</sup> Dublin Bay biosphere reserve will be managed by the newly established Dublin Bay Biosphere Partnership. UNESCO has designated more than 650 biospheres in 120 countries; Dublin Bay is the third to be designated in Ireland.

Source: *The Irish Times* (2015) [irishtimes.com/news/environment/dublin-bay-awarded-biosphere-designation-by-unesco-1.2261435](http://irishtimes.com/news/environment/dublin-bay-awarded-biosphere-designation-by-unesco-1.2261435)

### Organic farming benefits biodiversity

A new study suggests organic farms act as a refuge for wild plants, offsetting the loss of biodiversity on conventional farms. Fields around organic farms have more types of wild plants, providing benefits for wildlife. The study looked at fields sowed with winter wheat in the region of Poitou-Charente,

France, and found that organic farming led to higher weed diversity on surrounding conventionally farmed fields. Organic farming can help maintain wild plants that are important for birds, bees and other farmland species, but even a mixture of organic and non-organic farming in an area can help maintain this biodiversity. Farmland provides essential habitat for many animals but intensification of agriculture has led to a loss of biodiversity. Supporters of organic farming believe it could be a potential compromise between meeting food security needs and providing habitat for bees, birds and other wildlife.

Source: *Proceedings of the Royal Society B: Biological Sciences* (2015) [dx.doi.org/10.1098/rspb.2015.0002](http://dx.doi.org/10.1098/rspb.2015.0002) & *BBC News* (2015) [bbc.co.uk/news/science-environment-32781136](http://bbc.co.uk/news/science-environment-32781136)

## NORTH AFRICA AND MIDDLE EAST

### Threat to Syria's northern bald ibis near Palmyra

The northern bald ibis may become extinct in Syria because of the capture of Palmyra in the ongoing regional conflict. A tiny breeding colony of the northern bald ibis was found near the city in 2002 (see *Oryx*, 2004, 38, 106–108). Three birds held in captivity were abandoned in May after their guards fled the fighting. Officials have offered a reward of USD 1,000 for information about the whereabouts of a fourth bird. The missing female, Zenobia, is the only bird who knows the migration routes to wintering grounds in Ethiopia (see *Oryx*, 2009, 43, 329–335, & 2015, 49, 312–320) and without her, other captive birds cannot be released and the species could go extinct in the wild in Syria. Despite being protected since its discovery in 2002, numbers in the colony dwindled to only four wild birds, and this year only Zenobia returned. Another three captive birds were being kept nearby but it is not clear if they are still safe.

Source: *BBC News* (2015) [bbc.com/news/world-middle-east-32872350](http://bbc.com/news/world-middle-east-32872350)

## SUB-SAHARAN AFRICA

### Genetic analysis reveals hotspots of elephant poaching . . .

Analysis of genetic material from 28 consignments of ivory seized during 1996–2014 has revealed that poaching of elephants in Africa has occurred at high rates

in two regions of the continent. Tusks from savannah elephants were predominantly from south-eastern Tanzania and northern Mozambique, with 86–93% of tusks seized by the authorities since 2006 originating in this region. A hotspot of forest-elephant poaching was identified in central Africa, comprising areas of Gabon, the Republic of Congo and the Central African Republic. The rate at which poaching of elephants is occurring is such that African populations face the threat of extinction, with an estimated 40,000 individuals killed in 2011 and potentially > 50,000 in 2013. Identifying poaching hotspots could help to focus law-enforcement efforts to tackle the transnational illegal wildlife trade.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aaa2457](https://doi.org/10.1126/science.aaa2457) & *Nature* (2015) [dx.doi.org/10.1038/522394a](https://doi.org/10.1038/522394a)

### ... and catastrophic decline of Tanzania's elephants

The Government of Tanzania has acknowledged the scale of the country's elephant poaching crisis, and announced measures to protect the remaining elephants. Population estimates indicate that elephants declined from an estimated 109,051 in 2009 to 43,330 in 2014, and poaching for ivory is the most likely cause of this decline. Records of ivory seizures since 2009 indicate that more of the ivory destined for markets in Asia originated in Tanzania than in any other African country, and the ports of Dar es Salaam and Zanzibar have become major exit points for shipments of ivory. The country's Ruaha-Rungwa ecosystem is of particular concern, as only c. 8,272 elephants remained there in 2014, compared to 34,664 in 2009. The government has pledged to recruit an additional 500 rangers this year, double the number of rangers in Ruaha-Rungwa, and cooperate more closely with neighbouring Zambia to tackle the poaching crisis.

Source: *TRAFFIC* (2015) [traffic.org/home/2015/6/2/tanzania-begins-to-face-its-elephant-disaster.html](https://www.traffic.org/home/2015/6/2/tanzania-begins-to-face-its-elephant-disaster.html)

### Large carnivores not faring well in protected areas

A study of the persistence of three large carnivore species in the protected areas of West and Central Africa has shown that lions have almost gone extinct in 23 of the 38 protected areas (68%) where they occurred historically. Cheetahs and wild dogs have gone extinct in 73 and 90% of their historical sites, respectively. For all three species combined, the number of protected areas where extinctions have occurred is significantly higher in West Africa than in Central

Africa. Protected areas with surviving lion populations are significantly larger than those with extinct populations, but it was found that human population density in the vicinity of a protected area is not a good predictor of lion extinction. The study suggests that the presence of mobile pastoralists around protected areas may better explain the extinction pattern of large predators.

Source: *Tropical Conservation Science* (2015) [tropicalconservationscience.mongabay.com/content/v8/tcs\\_v8i2\\_513-527\\_Brugiere.pdf](https://www.tropicalconservationscience.mongabay.com/content/v8/tcs_v8i2_513-527_Brugiere.pdf)

### Intensive study of the long-billed tailorbird

As part of a conservation project by BirdLife International and the RSPB in the East Usambara Mountains in Tanzania, an intensive effort has been made to study the Critically Endangered long-billed tailorbird and gather information on its distribution and habitat requirements. Local ornithologists were trained to recognize the small, unobtrusive bird, and over the course of a year they produced a high-resolution map of the species' distribution. The East Usambara Mountains are home to the majority of the population, and the species is found only in one other location, in northern Mozambique. The heavily forest-dependent bird has specific habitat requirements, being found only in areas of forest > 300 ha, and is also restricted to relatively open areas of forest and is thus subject to human disturbance. Seventeen new territories for the species were discovered during the survey, which will facilitate targeted conservation efforts.

Source: *BirdLife International* (2015) [birdlife.org/africa/news/survey-success-tanzania-17-new-territories-found-critically-endangered-long-billed](https://www.birdlife.org/africa/news/survey-success-tanzania-17-new-territories-found-critically-endangered-long-billed)

### Education and roadside signs recommended to reduce collisions with wildlife

Researchers have studied driver attitudes to animal-vehicle collisions on roads in the savannah grassland of the Tarangire-Manyara ecosystem in Tanzania. Significant numbers of collisions occur in the area, which is rich in biodiversity, with 350 bird, 290 reptile, 40 amphibian and 35 large mammal species. Drivers who had experienced collisions completed questionnaires, and high speed was reported as one of the primary causes of collisions. Drivers perceived that large mammals were involved in collisions more often than other animals but in fact birds were hit most often, followed by mammals,

reptiles and amphibians. Eighty percent of drivers maintained that other drivers respected wildlife crossing the road, and the majority indicated they would make an effort to avoid a collision if possible. The researchers identified a need for driver education to promote safe driving habits, and the use of road signs, particularly during peak migration periods, to increase drivers' awareness of wildlife on the roads.

Source: *Tropical Conservation Science* (2015) [tropicalconservationscience.mongabay.com/content/v8/tcs\\_v8i2\\_352-366\\_Kioko.pdf](https://www.tropicalconservationscience.mongabay.com/content/v8/tcs_v8i2_352-366_Kioko.pdf)

### Lions to be reintroduced to Rwanda

Seven lions have been reintroduced to Rwanda, where the species has been absent for 15 years, having been wiped out in the wake of the 1994 genocide. During the upheaval national parks were left unmanaged and were occupied by displaced people, and the last remaining lions were poisoned by cattle herders. The lions, five males and two females, have been donated by two relatively small parks in South Africa that have a surplus of lions. They were chosen on the basis of future reproductive potential in the hope that the country's lion population will be restored to previous numbers. The lions were transported to Rwanda's Akagera National Park, where they will be monitored using satellite collars. The Park is already home to antelopes, buffaloes, giraffes, zebras, elephants and leopards, and it is hoped the reintroduction of lions will help restore the natural balance of the ecosystem.

Source: *The Guardian* (2015) [theguardian.com/world/2015/jun/28/rwanda-lions-reintroduced-south-africa-akagera-national-park](https://www.theguardian.com/world/2015/jun/28/rwanda-lions-reintroduced-south-africa-akagera-national-park)

### Park rangers killed in Democratic Republic of Congo

More than 100 park rangers have been killed in the line of duty in Virunga National Park, Democratic Republic of Congo, in recent years, but 2015 had been relatively peaceful until 18 June, when one ranger was killed and several others injured in a violent attack by armed rebels. Virunga is Africa's oldest national park and is renowned for its mountain gorilla population, which is undergoing a recovery following decades of civil wars. Illegal exploitation of natural resources is a key driver of conflict in the region and it is thought that the rebels responsible for the latest attack were attempting to gain control of Lake Edward for transportation and illegal fishing. In another of the country's parks, Garamba National Park, a ranger died after being shot by armed poachers on 25

April. These deaths highlight the vulnerability of the country's national parks and the courage and commitment of the rangers who risk their lives to protect them.

Source: *Fauna & Flora International* (2015) [fauna-flora.org/news/ranger-killed-by-poachers-in-garamba-national-park-drc](http://fauna-flora.org/news/ranger-killed-by-poachers-in-garamba-national-park-drc) & *National Geographic* (2015) [news.nationalgeographic.com/2015/06/150626-virunga-park-ranger-killed-gorilla-world](http://news.nationalgeographic.com/2015/06/150626-virunga-park-ranger-killed-gorilla-world)

### Madagascar designates three new protected areas . . .

The Government of Madagascar has assigned permanent legal protection to three of the country's most important sites for nature. The Mahavavy–Kinkony Wetland Complex, Mangoky–Ihotry Wetland Complex and Tsitongambarika Forest cover almost 800,000 ha and support rich biodiversity, including endemic and threatened species and habitats, and newly discovered species of frogs and reptiles that have yet to be named. The two wetland sites are home to a number of threatened bird species, including the Endangered Sakalava rail and the Critically Endangered Madagascar fish eagle. The new protected areas will be managed jointly by the conservation NGO Asity Madagascar and local communities, an arrangement that has been in place since the sites were made temporary protected areas in 2008. Management activities at the sites have already yielded successful outcomes, and the official designation will provide a legal framework and incentives for conservation and sustainable development.

Source: *BirdLife International* (2015) [birdlife.org/africa/news/new-protected-areas-madagascar](http://birdlife.org/africa/news/new-protected-areas-madagascar)

### . . . but its lemurs remain severely threatened . . .

Almost all of Madagascar's 106 known species of lemurs are at risk of extinction and many of them are categorized as Critically Endangered on the IUCN Red List. Their forest habitat is increasingly under threat, and only 10% of the country's original forest remains. Forests are cleared in a form of slash-and-burn agriculture to make way for plantations of rice and other crops, even in nominally protected areas. Another major threat to lemurs is the demand for bushmeat among the impoverished human populations. Although it is illegal to kill lemurs it is estimated that up to 10% of the lemur population may be killed each year by poachers, and the

traditional taboo about eating lemurs is increasingly disregarded as the population becomes more mobile. Local conservation organizations are engaging local communities and supporting the development of more sustainable livelihoods and ecotourism.

Source: *BBC News* (2015) [bbc.co.uk/news/science-environment-33096260](http://bbc.co.uk/news/science-environment-33096260)

### . . . and the invasive Asian toad is cause for concern

The highly invasive and poisonous Asian toad *Duttaphrynus melanostictus* was discovered in Madagascar in 2014, in the port of Toamasina, but a new study indicates the species may have been introduced in 2010 or earlier. The toad is adaptable to a wide range of environments, including forests, farmland and urban areas, and altitudes up to 2,000 m, which makes it a significant threat to many of Madagascar's sensitive ecosystems. During 120 visual encounter surveys conducted in 2014 the toad was located at 48 sites, including urban areas, rural villages, rice paddies and mixed Eucalyptus forests. There is an urgent need for more surveys to delineate the toad's current range, as a starting point for population control and possible eradication measures. Madagascar's unique biodiversity, with an extraordinary level of endemism, is under threat, and the spread of the Asian toad underscores the need for improved biosecurity measures to mitigate the threat of invasive species.

Source: *Mongabay* (2015) [news.mongabay.com/2015/0706-pereira-asian-toad.html](http://news.mongabay.com/2015/0706-pereira-asian-toad.html)

### Disfiguring the ploughshare tortoise to save the species

Ploughshare tortoises *Astrochelys yniphora* are highly sought after for their beautiful shells, which are a lucrative commodity in the illegal wildlife trade. In a bid to save the species from extinction, conservationists have begun to deface the shells of all remaining individuals by engraving them with serial numbers in the hope that this will make them of little or no value to poachers. There may be < 500 of the tortoises remaining in the wild in their native Madagascar, where they are found only in a remote area at Baly Bay in the north-west, which has been designated a national park. A captive-breeding centre is in operation but this too is targeted by poachers. Another potential threat to the species is the proposal by a Chinese company to begin mining for iron ore 30 km inland from Baly Bay, with the construction of a

new port on the coast and a road through the national park.

Source: *BBC News* (2015) [bbc.co.uk/news/science-environment-33096261](http://bbc.co.uk/news/science-environment-33096261)

## SOUTH AND SOUTH-EAST ASIA

### Sniffing out wildlife crime in India . . .

The latest cohort of 14 sniffer dogs trained in India to tackle wildlife crime marks a doubling in numbers of the country's wildlife sniffer dogs. The dogs are trained to sniff out wildlife products such as the bones and skins of tigers and leopards, and bear bile, and the latest recruits will be deployed across the tiger range states of Madhya Pradesh, Assam, Uttarakhand, Maharashtra, Tamil Nadu, Jharkhand and Karnataka. The first cohort was trained in 2008, under a programme conducted by the wildlife trade monitoring network TRAFFIC and jointly funded by TRAFFIC and WWF–India, and they are emerging as a key resource in tackling wildlife crime and illegal wildlife trade, having made > 100 significant seizures of wildlife products in recent years. One of the dogs, Jimmy, has helped intercept at least 25 cases of wildlife poaching and smuggling, and was awarded a certificate of merit in 2013.

Source: *TRAFFIC* (2015) [traffic.org/home/2015/6/20/india-doubles-number-of-sniffer-dogs-for-wildlife-protection.html](http://traffic.org/home/2015/6/20/india-doubles-number-of-sniffer-dogs-for-wildlife-protection.html)

### . . . where a media campaign highlighted the plight of non-charismatic species in the illegal wildlife trade

Conservation NGOs and the Wildlife Crime Control Bureau have launched a media campaign in New Delhi to raise awareness of the illegal trade of less well-known species, such as pangolins, mongooses and monitor lizards. Unlike the trade in charismatic flagship species such as tiger, elephant and rhinoceros, there is little knowledge of the trade in non-charismatic species and its impact on the population status of such species. The campaign, *Preserving the Future: Stop Illegal Wildlife Trade*, targeted 1.4 million users of social media, using a combination of engaging images, infographics and recommendations for action. Although hundreds of pangolins, lizards and tortoises are poached in India every year, in addition to an estimated 700,000 birds, there are few data available on the levels of exploitation of these species. The campaign was intended to garner the

support and raise the awareness of the general public about illegal wildlife trade.

Source: TRAFFIC (2015) [traffic.org/home/2015/5/6/preserving-the-future-digit-al-campaign-illuminates-illegal-t.html](http://traffic.org/home/2015/5/6/preserving-the-future-digit-al-campaign-illuminates-illegal-t.html)

### Conservation status of the leopard cat in the Western Ghats

Acknowledging the scant ecological knowledge on small felids of Asia, a study by the Wildlife Conservation Society, India Program, assessed populations of the leopard cat *Prionailurus bengalensis* in the Western Ghats landscape of India. With poaching, habitat loss and the illegal pet trade threatening their survival, there is a need for extensive and targeted assessments of leopard cat populations across their range. The study identified two of the four reserves surveyed as potential population strongholds. Within areas where the species occurs, higher densities were recorded around secondary or disturbed forests and forest–coffee mosaics. Densities were also high near human settlements, probably driven by the presence of rodents. The researchers propose that annual estimates of abundance be combined with continuous population monitoring, to facilitate a re-assessment of the conservation status of the Western Ghats subpopulation of leopard cats, which is currently categorized as Least Concern on the IUCN Red List.

Source: *Journal of Mammalogy* (2015) [dx.doi.org/10.1093/jmammal/gyv079](https://doi.org/10.1093/jmammal/gyv079)

### Sloth bear case study exemplifies strategy for conserving non-protected habitats

A study by the Wildlife Conservation Society, India Program, of the distribution patterns of sloth bears *Melursus ursinus* at two scales, across India and in the Western Ghats of Karnataka, offers a strategy for conserving multi-use landscapes. At the countrywide scale sloth bears were found to occupy 67% of available habitat and were not limited to protected areas. On a smaller scale, however, within the Western Ghats, the bears preferred locations free of human presence, in addition to drier forests and steeper areas. The study highlights the importance of multi-use forests, open scrub and barren lands to support wildlife populations. Given that sloth bears are widespread and have a relatively benign relationship with humans, the researchers recognize their potential to serve as an umbrella species for securing unprotected habitats in India. This could help prioritize wildlife areas within larger landscapes and complement current conservation strategies for large mammals.

Source: *Diversity and Distributions* (2015) [dx.doi.org/10.1111/ddi.12335](https://dx.doi.org/10.1111/ddi.12335)

### Sri Lanka promises to protect mangroves

Sri Lanka has become the first country to commit to providing legal protection for all its mangroves, which sustain c. 80% of the fish caught and consumed there. With 21 species of mangroves, which grow in brackish swamps and lagoons, Sri Lanka is a hotspot for mangrove biodiversity but there has been widespread clearance of mangroves to make way for shrimp ponds, among other things. In a USD 3.4 million deal with the California-based NGO Seacology, the Small Fishers Federation has recruited hundreds of coastal communities to participate in a replanting programme and protect the remaining 9,000 ha of mangroves. There are plans to plant an additional 4,000 ha of nurseries, and put rangers in place to carry out coastal patrols. As part of the deal, 15,000 women will receive training and funding to establish businesses in return for their participation in protecting the mangroves.

Source: *New Scientist* (2015) [newscientist.com/article/dn27498-sri-lanka-first-nation-to-promise-full-protection-of-mangroves.html#.VZFyByFwZhE](http://newscientist.com/article/dn27498-sri-lanka-first-nation-to-promise-full-protection-of-mangroves.html#.VZFyByFwZhE)

### Vietnam strengthens commitment to tackling illegal wildlife trade

Vietnam's Central Committee of Communications and Education has signed a Memorandum of Understanding with TRAFFIC, the wildlife trade monitoring network, to address illegal and unsustainable wildlife trade and consumption through raising awareness across various sectors of society, including enforcement officers, business people and the public. A social marketing campaign will target travellers passing through Noi Bai International Airport in Hanoi, one of the country's busiest airports and a major hub for the transportation of illegal wildlife products. Passengers will be targeted with messages delivered by means of posters, billboards, electronic displays and exhibitions, intended to change their attitudes and behaviour towards the consumption of rhinoceros horn and other wildlife products. Law enforcement will also be stepped up at the airport as part of the initiative.

Source: TRAFFIC (2015) [traffic.org/home/2015/6/19/the-viet-nam-central-committee-of-communications-and-educati.html](http://traffic.org/home/2015/6/19/the-viet-nam-central-committee-of-communications-and-educati.html)

### Illegal trade in bear parts is widespread in Malaysia

A survey carried out by TRAFFIC, the wildlife trade monitoring network, found the illegal trade in bear bile and gall bladder for use in traditional medicine is widespread across Malaysia. Of 365 shops surveyed, 175 claimed to sell bear gall bladders and medicines containing bear bile, and in more than half of the shops staff were aware that trade in bear parts and products is illegal. Bear products were found for sale in every state. In Peninsular Malaysia bear bile pills were the most common item sold, whereas whole gall bladders were observed most frequently in the states of Sabah and Sarawak, in Malaysian Borneo, and were sourced locally according to most vendors. Overall, it was claimed that almost 60% of gall bladders observed for sale were sourced locally from wild sun bears. These findings indicate the illegal trade in Malaysia could represent a serious threat to wild bear populations.

Source: TRAFFIC (2015) [traffic.org/home/2015/5/29/survey-finds-medicines-from-bear-parts-widely-available-in-m.html](http://traffic.org/home/2015/5/29/survey-finds-medicines-from-bear-parts-widely-available-in-m.html)

### Thousands of freshwater turtles seized in the Philippines...

In June authorities in the Philippines seized > 4,400 freshwater turtles believed to be destined for markets in China. The turtles, which were seized in southern Palawan, included 3,907 Palawan forest turtles, 168 Asian leaf turtles and 25 South-east Asian box turtles. The turtles were in poor condition and showed signs of neglect, and 159 of the Palawan forest turtles had died in captivity. This species is extremely rare and is sought after for the pet trade and for consumption. It is listed in Appendix II of CITES, and this was the largest known seizure of the species to date. It is thought the turtles were collected from across their native range in northern Palawan, and releasing the survivors back to the wild will involve a painstaking process involving genetic testing of individuals to identify their origin.

Source: TRAFFIC (2015) [traffic.org/home/2015/6/24/thousands-of-critically-endangered-palawan-forest-turtles-se.html](http://traffic.org/home/2015/6/24/thousands-of-critically-endangered-palawan-forest-turtles-se.html)

### ...and marine expedition discovers c. 100 new species

A joint American–Filipino marine expedition has discovered c. 100 species thought to be new to science off the northern coast of Mindoro island in the Philippines. The discoveries included > 40 species of

nudibranchs (brightly coloured sea slugs), barnacles and urchins. Divers explored marine habitats at varying depths, from shallow coral reefs to deeper, dimly lit areas, and at certain times in the expedition they were discovering at least 10 unknown species per hour. The Philippines is rich in marine biodiversity, enhanced by the mixing of warm waters with nutrient-rich cold waters in the Verde Island Passage, which separates the islands of Luzon and Mindoro. It is hoped the new discoveries will highlight the richness of marine life in the region and encourage conservation efforts for its coral reefs.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aac6821](https://doi.org/10.1126/science.aac6821)

## EAST ASIA

### Action plan to save the Hainan gibbon

An international team led by the Zoological Society of London has produced a plan to save the world's rarest primate, the Hainan gibbon *Nomascus hainanus*. The Critically Endangered gibbon resides on China's Hainan Island, and only 25 individuals remain in < 20 km<sup>2</sup> of forest. The population has declined from > 2,000 in the 1950s as a result of human activities such as logging and planting of rubber, which destroyed much of the species' habitat. With such a small population remaining, and given its isolation, the species is at risk of extinction. If this were to occur it would be the first ape species to be wiped out as a result of human activity. The conservation action plan identifies > 40 actions necessary to ensure the species' long-term survival, including monitoring remaining individuals, increasing connectivity between forest fragments, and limiting anthropogenic disturbance. The Hainan gibbon and its habitat are now protected under Chinese law.

Source: *Nature* (2015) [dx.doi.org/10.1038/521398a](https://doi.org/10.1038/521398a), and *Zoological Society of London* (2015) [zsl.org/science/news/new-action-plan-to-save-world%E2%80%99s-rarest-primate](https://zsl.org/science/news/new-action-plan-to-save-world%E2%80%99s-rarest-primate)

## NORTH AMERICA

### Red wolf may be heading for extinction...

The U.S. Fish and Wildlife Service is evaluating its recovery efforts for the Critically Endangered red wolf *Canis rufus* before it decides whether to continue managing the only remaining population in the wild. The

species was hunted almost to extinction in the 20th century and was Extinct in the Wild by 1980. A captive-breeding population was established in zoos and in 1987 the Fish and Wildlife Service began reintroducing the species into the wild. The main threat to the species is hybridization with coyotes, and some scientists argue that the red wolf is no longer a distinct species but a hybrid. The remaining population comprises 50–75 individuals on a peninsula in North Carolina, and no new wolves will be released on the peninsula while the review is underway. Wolves are often mistaken for coyotes, which prompted the introduction of a ban on night-time hunting of coyotes in 2013, to protect the wolves.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aac6924](https://doi.org/10.1126/science.aac6924)

### ...but the lesser prairie chicken may yet survive...

The lesser prairie chicken was once abundant in the grass and shrublands of the mid-western and south-western USA, with a population of up to 2 million individuals. However, under pressure from habitat loss and other threats the population has declined to c. 22,000 and occupies only c. 16% of its historical range. Following a severe drought in 2012 and 2013 the species was listed as threatened under the federal Endangered Species Act, prompting an urgent effort to learn more about the species and save it from extinction. The prairie chicken's home range lies in the heartland of America's agricultural industry, and the research effort may influence how industries operate in prairie habitats, giving them responsibility for management of the bird. The conservation effort is controversial among industry and environmental groups alike, the former claiming it goes too far and the latter that it doesn't go far enough.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aac6839](https://doi.org/10.1126/science.aac6839)

### ...and conservation of the great sage-grouse may benefit hundreds of species

During 2007–2013 the number of breeding male greater sage-grouse fell by > 50% across 11 states of the USA, as the species' sagebrush habitat was degraded and destroyed by wildfires and anthropogenic activity. The iconic bird was revered by native Americans and is known for its elaborate mating dance, during which the male displays brightly coloured chest sacs. The sage-grouse was once abundant but is now under consideration for inclusion on the

U.S. Fish and Wildlife Service's Endangered Species List. The Bureau of Land Management, which manages > 60% of sagebrush habitat in the USA, has announced proposals to conserve the species by protecting its habitat, including limiting mining and ranching activities and placing restrictions on development in the oil, gas and renewable energy sectors. Although the sage-grouse is the target of the conservation action, over 300 species of plants and animals rely on the same habitat and may also benefit.

Source: *The Guardian* (2015) [theguardian.com/environment/2015/jun/12/greater-sage-grouse-us-habitat-threat](https://theguardian.com/environment/2015/jun/12/greater-sage-grouse-us-habitat-threat)

### Black bear bounds back

The black bear is present in only c. 50% of its historical range in the USA but efforts to protect the species and its habitat are paying off, particularly in the east, where bears are making a comeback and expanding their range. Hunting and habitat loss took their toll during the 20th century but there are now an estimated 800,000 bears in North America. In Louisiana the bear population has increased to c. 750 or more as a result of legal protection, improved habitat and a reintroduction programme, and may be removed from the Endangered Species List. In two areas in Florida bear numbers have increased by 50% and almost one third since 2002, and there has also been a resurgence in the bear population in Maryland, where the species is protected by law and young forests have matured into bear-friendly landscapes.

Source: *National Geographic* (2015) [news.nationalgeographic.com/2015/06/150626-black-bears-animals-science-nation-conservation/](https://news.nationalgeographic.com/2015/06/150626-black-bears-animals-science-nation-conservation/)

### Loss of plant diversity in dry California

A study of Californian grassland communities has revealed a decline in plant diversity as the grassland area has become more arid since 2000. The number of species at 80 sites monitored across the 27 km<sup>2</sup> study area decreased during the 2000–2014 study period, in line with a decrease in precipitation during winter. The decline was recorded across multiple functional groups and soil environments, and was particularly evident among native annual forbs with a high specific leaf area, a trait that indicates intolerance to drought. Other possible causes of the decline, such as fire, livestock grazing, invasive species, and changes in soil nitrogen levels were investigated and ruled out. The findings are consistent with forecasts of plant diversity losses in



semiarid regions as they become more arid and less productive, and may be an indicator of future larger-scale extinctions under climate change.

Source: *Proceedings of the National Academy of Sciences of the United States of America* (2015) [dx.doi.org/10.1073/pnas.1502074112](https://doi.org/10.1073/pnas.1502074112) & *Nature* (2015) [dx.doi.org/10.1038/522395e](https://doi.org/10.1038/522395e)

### Florida panther numbers estimated from road-kill data

Researchers have produced what they say are the first statistically robust population estimates for the threatened Florida panther across its breeding range, using reports from the public of road collisions with the animals, and routine telemetry monitoring data from a small number of radio-collared individuals. Their findings indicate the population may not have exceeded 150 individuals during 2000–2012, although it appears to be increasing slowly. Recovery criteria for the species require the establishment of three distinct populations of 240 individuals. This research highlights the value of citizen-based data on human–wildlife interactions in long-term monitoring of species over large areas, which tends to be an underutilized resource.

Source: *Journal of Applied Ecology* (2015) [dx.doi.org/10.1111/1365-2664.12438](https://doi.org/10.1111/1365-2664.12438) & *Nature* (2015) [dx.doi.org/10.1038/523008b](https://doi.org/10.1038/523008b)

## CENTRAL AMERICA AND CARIBBEAN

### New rodent discovered... the name's Bond

A new species of rodent has been discovered on the Caribbean island of Hispaniola by a team led by the Zoological Society of London. The large guinea pig-like rodent has been named James Bond's hutia *Plagiodontia aedium bondi* after the American ornithologist whose name was appropriated for Ian Fleming's fictional spy character. Bond identified a biogeographical barrier in southern Haiti, now known as Bond's Line, which separates the newly discovered hutia from its closest relatives. Hutias are unique to the Caribbean and once numbered > 30 species, but many species became extinct following human colonization of the islands and there may be as few as eight remaining. Human activity in the Caribbean continues to threaten species found on isolated islands, and James Bond's hutia is threatened by deforestation, which occurs even in protected areas.

Source: *Zoological Society of London* (2015) [zsl.org/science/news/live-and-not](https://zsl.org/science/news/live-and-not)

### let-die-new-endangered-rodent-named-after-james-bond

### Revised population estimate for the pygmy three-toed sloth

The Critically Endangered pygmy three-toed sloth *Bradypus pygmaeus*, described as a distinct species in 2001, is endemic to the island of Escudo de Veraguas, Panama. The population was originally estimated at < 500 individuals, but following a radio-tracking study that revealed the sloths inhabit the interior of the island as well as the mangroves on its periphery, this estimate has been revised upwards. The island could host several thousand of the sloths, with the actual number estimated to be 500–1,500. The primary threat to the species is loss and degradation of its forest habitat as a result of timber harvesting; the sloth relies on various trees as a source of food although it is not yet known which species are essential for its survival. The pet trade is another threat, with a high demand for such a rare and exotic species, and the species has been added to CITES Appendix II.

Source: *Journal of Mammalogy* (2015) [dx.doi.org/10.1093/jmammal/gyv078](https://doi.org/10.1093/jmammal/gyv078)

### New protected areas established in the Bahamas

The Bahamas National Protected Area System has been expanded to include five new national parks on San Salvador island, which is where Columbus is thought to have first set foot in the New World. The 11 × 21 km island supports diverse plant communities, including mangroves and seagrass beds, is known for its abundance and diversity of seabirds, and is home to a number of threatened native species, including the Endangered San Salvador rock iguana and the West Indian woodpecker. The new national parks encompass 8,500 ha of pristine terrestrial and marine habitats, including an extensive mangrove system, a healthy coral reef system, seagrass beds, and tidal creeks, and two of the parks are designated as Key Biodiversity Areas. The parks also encompass the habitat of the Critically Endangered hawksbill turtle and a migratory route for humpback whales.

Source: *BirdLife International* (2015) [birdlife.org/americas/news/protection-key-nature-sites-bahamas](https://birdlife.org/americas/news/protection-key-nature-sites-bahamas)

### Jamaica's first World Heritage site announced

Jamaica's Blue and John Crow Mountains has been designated a World Heritage site based on cultural and natural value. The

site, which includes Jamaica's highest peak as well as a limestone plateau, is remarkably pristine and comprises the most diverse ecosystems and habitats on the island. The steep slopes are forested by unique montane tropical forests, and half of the flowering plants growing at 900–1,000 m on the John Crow plateau are found nowhere else. The site overlaps with one of the world's most irreplaceable areas for amphibians, mammals and birds and is of cultural importance for the local Maroon communities, who are actively engaged in its management.

Source: *IUCN* (2015) [iucn.org/news\\_home-page/?21608/Jamaicas-first-World-Heritage-listing-ups-the-number-of-natural-sites-to-229](https://iucn.org/news_home-page/?21608/Jamaicas-first-World-Heritage-listing-ups-the-number-of-natural-sites-to-229)

## SOUTH AMERICA

### Los Katios National Park removed from danger list

Following successful efforts by Colombian authorities to intensify patrolling efforts in Los Katios National Park and engage local communities in sustainable use of resources in the area the site has been removed from the List of World Heritage in Danger. Moreover, the ancestral rights of the indigenous Wounaan community to certain areas of the Park are now recognized, and their livelihood needs are taken into consideration in balance with conservation objectives. The Park was designated a World Heritage site in 1994 because of its rich biodiversity, including many endemic species. It provides important habitat for a number of threatened species, including Baird's tapir *Tapirus bairdii*, the giant anteater *Myrmecophaga tridactyla*, the American crocodile *Crocodylus acutus*, and the West Indian manatee *Trichechus manatus*. The Park was added to the danger list in 2009, having been damaged by illegal logging, poaching and fishing during many years of armed conflict in the region.

Source: *IUCN* (2015) [iucn.org/news\\_home-page/?21590/Colombian-World-Heritage-site-in-conflict-area-comes-off-danger-list-as-advised-by-IUCN](https://iucn.org/news_home-page/?21590/Colombian-World-Heritage-site-in-conflict-area-comes-off-danger-list-as-advised-by-IUCN)

### New frog species discovered in Brazil's cloud forest

Researchers exploring the mountainous cloud forests on Brazil's southern Atlantic coast have discovered seven new species of miniature frogs in isolated habitats. All belonging to the *Brachycephalus* genus, the tiny frogs have evolved with fewer fingers and toes than other frogs, and the largest of the new species is no more than 13 mm

in length when fully grown. Miniature frogs can bypass the tadpole stage, emerging fully formed from eggs, and thus they do not depend on proximity to standing water for their survival. The frogs are highly adapted to their environment, and therefore they are vulnerable to changes in their habitat as a result of climate change and human activity. Illegal logging is a major threat, as none of the new species are in protected areas. Climate warming could potentially result in the loss of humid forest, and with it the many endemic species that reside in it. Source: *The Guardian* (2015)

[theguardian.com/environment/2015/jun/04/seven-new-species-of-miniature-frogs-discovered-in-cloud-forests-of-brazil](http://theguardian.com/environment/2015/jun/04/seven-new-species-of-miniature-frogs-discovered-in-cloud-forests-of-brazil)

### Hydroelectric dams destroy tropical rainforest diversity

The Balbina hydroelectric dam, constructed 26 years ago in the Central Brazilian Amazon, is one of the world's largest in terms of the total area flooded. It inundated 3,129 km<sup>2</sup> of previously undisturbed continuous primary forest, creating an artificial archipelago of 3,546 islands. A research team carried out intensive biological surveys on 37 of these islands and three nearby areas of continuous forests to investigate how the habitat alteration and isolation had affected assemblages of medium and large-bodied terrestrial and arboreal vertebrates, including 35 target species of mammals, birds and tortoises. Their findings revealed a huge loss in vertebrate diversity, with only 25 of the 3,456 islands now likely to harbour at least 80% of the target species surveyed. With an unprecedented number of hydropower projects planned or under construction in lowland tropical forests, there is an urgent need for rigorous environmental impact assessments to consider long-term biodiversity impacts.

Source: *PLoS ONE* (2015) [dx.doi.org/10.1371/journal.pone.0129818](http://dx.doi.org/10.1371/journal.pone.0129818) & *National Geographic* (2015) [news.nationalgeographic.com/energy/2015/07/150701-hydro-power-dam-threatens-amazon-wildlife/](http://news.nationalgeographic.com/energy/2015/07/150701-hydro-power-dam-threatens-amazon-wildlife/)

## AUSTRALIA/ANTARCTICA/ NEW ZEALAND

### The crab known as The Hoff gets scientific name

A new species of yeti crab (the first known from the Southern Ocean), which was initially given the nickname The Hoff after the American actor David Hasselhoff, has

been formally described and given the scientific name *Kiwa tyleri* in honour of the British polar and deep-ocean biologist Paul Tyler. The squat lobster is found in communities in hydrothermal vents on the sea-floor, and sustains itself by harvesting bacteria hosted on the hair-like setae that cover its belly. It scrapes off the microbes using comb-like mouthparts, and the spines on its legs enable it to climb chimney-like structures to position itself optimally for food production. Few crabs and lobsters are known to exist in the cold polar waters of the Southern Ocean, and *K. tyleri* is adapted to a very narrow environmental niche, belonging to an ecosystem that is dependent on the specialized bacteria that exploit the hot fluid in hydrothermal vents.

Source: *BBC News* (2015) [bbc.co.uk/news/science-environment-33263621](http://bbc.co.uk/news/science-environment-33263621) & *PLoS ONE* (2015) [dx.doi.org/10.1371/journal.pone.0127621](http://dx.doi.org/10.1371/journal.pone.0127621)

### Lefty kangaroos show you don't have to be a primate to be a southpaw

Researchers have found that kangaroos display a preference for their left forelimb when carrying out tasks such as grooming and grazing. Wild kangaroos in Tasmania and continental Australia were observed and assessed according to a scale of handedness adapted for primates, and eastern grey kangaroos *Macropus giganteus* and red kangaroos *Macropus rufus* in particular showed signs of left-handedness at the population level. The findings challenge the assumption that strong manual lateralization is a unique feature of primate evolution, and the researchers argue that postural characteristics, in particular bipedality, are instrumental in the origin of handedness in mammals. In contrast to the strong lateralization observed in bipedal marsupials, marsupial quadrupeds displayed relatively weak forearm preferences.

Source: *Science* (2015) [dx.doi.org/10.1126/science.aac6859](http://dx.doi.org/10.1126/science.aac6859)

### Fewer than 50 Maui's dolphins remain

New research suggests the Critically Endangered Maui's dolphin could be extinct within 15 years if protection is not improved. The remaining population of Maui's dolphins has dropped below 50. A subspecies of Hector's dolphin, Maui's dolphin is found only in waters off New Zealand. Conservationists have recommended that fishing should be banned across the dolphin's entire habitat rather

than only in limited areas. New estimates indicate only 43–47 individuals, including c. 10 mature females, remain. Numbers of dolphins have declined since the 1970s. The main threat is fishing using gill-nets or trawling, which is estimated to kill five Maui's dolphins each year. The New Zealand government extended its restrictions on the use of set gill-nets in 2012 and again in 2013 but campaigners said these measures did not go far enough.

Source: *BBC News* (2015) [bbc.com/news/science-environment-32872037](http://bbc.com/news/science-environment-32872037)

### Big conservation goals on tiny Rotoroa

On Rotoroa Island, off the coast of New Zealand, a radical conservation experiment has been underway over the past few years. The plan, which is being implemented by Auckland Zoo in partnership with the Rotoroa Island Trust, is to introduce 20 threatened species to the island and create a new ecosystem, managing the environment carefully to maximize species' chances of survival. Prior to 2005 the island had been a Salvation Army treatment facility for men suffering drug and alcohol addictions, and much of the native vegetation had been cleared. With the exception of a population of weka *Gallirallus australis* and large numbers of rats, very little survived on the island. The restoration project began with clearing crops, planting native plants and eradicating the rats. The first of the new species were introduced last year: North Island saddlebacks *Philesturnus rufusater*, whiteheads *Mohoua albicilla*, North Island brown kiwis *Apteryx mantelli*, and moko skinks *Oligosoma moco*.

Source: *The Guardian* (2015) [theguardian.com/environment/radical-conservation/2015/apr/21/rotoroa-new-zealand-birds-wildlife-rewilding](http://theguardian.com/environment/radical-conservation/2015/apr/21/rotoroa-new-zealand-birds-wildlife-rewilding)

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