Briefly

INTERNATIONAL

Population declines for the world's fastest land animal...

Research led by the Zoological Society of London and the Wildlife Conservation Society has provided the most comprehensive assessment of the cheetah's conservation status to date. Cheetahs now occupy just 9% of their former territory and dramatic declines have left an estimated 7,100 individuals remaining in the wild. In Zimbabwe the cheetah population has declined by 85% in just 16 years, and in Iran there are thought to be fewer than 50 individuals remaining in the wild. Population declines coupled with increased pressure caused by habitat loss, the exotic pet trade and illegal harvesting of cheetah parts has prompted calls for the cheetah to be recategorized from Vulnerable to Endangered on the IUCN Red List. Cheetahs are wide ranging and, with 77% of their habitat outside protected areas, their space requirements leave them vulnerable to anthropogenic impacts. Researchers are stressing the need for conservation of the species across borders.
Source: The Guardian (2016) theguardian.com/environment/2016/dec/27/cheetah-more-vulnerable-to-extinction-than-previously-thought

...and the world's tallest...

Previously categorized as Least Concern, giraffes have been recategorized as Vulnerable in the latest update to the IUCN Red List. Global giraffe populations have experienced a 38% decline in the last 30 years, falling from an estimated 157,000 individuals to 97,500, and giraffes have already become extinct in seven countries. Habitat loss from farming and deforestation, illegal hunting and the impact of civil wars in Africa are increasing pressure on the remaining populations.
Source: The Guardian (2016) theguardian.com/environment/2016/dec/08/giraffe-red-list-vulnerable-species-extinction

...but some humpback whale populations are showing signs of recovery

One of the largest genetic studies of the humpback whale has revealed previously unknown degrees of relatedness between populations on opposite sides of the African continent, and supports previous observations of individual males moving between populations in different ocean basins. The study, which involved analysis of more than 3,000 skin samples from whales from 12 locations from the South Atlantic to the Indian Oceans, also confirmed the uniqueness of a small, non-migratory population in the Arabian Sea. The humpback whale was protected internationally in 1966, having been severely depleted by commercial whaling, and the latest findings indicate that after 5 decades of protection all but four populations globally are recovering. The findings will be crucial in informing effective management and conservation of the species, which still faces threats from pollution, shipping, entanglement in fishing gear, and noise, and experts recommend that populations of fewer than 200 individuals be a conservation priority.
Source: Molecular Ecology (2017) dx.doi.org/10.1111/mec.13943, & *WCS* (2017) newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/9660/Massive-Genetic-Study-of-Humpback-Whales-To-Inform-Conservation-Assessments-of-Ocean-Giants.aspx

The world's oceans mapped in three dimensions

A new 3D map of ecological marine units groups together marine regions of similar salinity, temperature, oxygen and nutrient levels into 37 categories based on data averaged over 5 decades. The map provides a baseline for analysis of future ocean changes as well as helping to reveal why marine animals live where they do. For instance, in the eastern tropical Pacific Ocean the boundary between oxygen-poor and oxygen-rich waters shifts towards the surface in some areas, which affects the locations of tuna fisheries. The map represents the most detailed attempt to date to map the world's oceans, and the data could assist in the designation of ecologically or biologically significant marine areas for future conservation efforts. Nations who do not have the resources to map their own water masses can use the freely available ecological marine unit data to inform their marine conservation strategies.
Source: Nature (2017) nature.com/news/3d-ocean-map-tracks-ecosystems-in-unprecedented-detail-1.21240

IUCN launches management guidelines for wilderness protected areas

The IUCN Wilderness Specialist Group has produced guidelines for the management of category 1b protected areas (i.e. wilderness areas), with contributions from an international team of experts, including field managers, researchers and policy makers from governments and NGOs, and both indigenous and non-indigenous peoples. Wilderness areas are increasingly threatened by human population growth, climate change, and development, and their management requires consideration of both ecological and cultural values to facilitate healthy relationships between people and wild nature. The guidelines cover a broad range of issues related to wilderness protection, including the history, objectives and extent of the protected areas; key management principles and tools; governance and authority frameworks; and approaches to evaluating the effectiveness of category 1b sites.
Source: IUCN (2016) iucn.org/news/wilderness-protected-areas-management-guidelines

Infrastructure developments threaten tiger populations

A report by WWF warns that proposed large-scale infrastructure projects in tiger range countries could undermine progress made since 2010, when 13 countries pledged to double the number of wild tigers by 2022. There are estimated to be 3,000–4,000 tigers remaining in the wild, and although some populations in India, Nepal, Bhutan and Russia have shown signs of recovery, numbers in South-east Asia continue to decline. Across Asia large-scale infrastructure developments have been proposed to service a growing population, and c. 11,000-km of planned roads and railway lines will cross tiger habitats. The proposed infrastructure would make tiger habitats more accessible and increase the potential for human–tiger conflict. The report highlights developments proposed in the Dawna Tenasserim Landscape along the border between Thailand and Myanmar, which is home to c. 250 wild tigers, and the Terai Arc Landscape on the India–Nepal border.
Source: Mongabay (2016) news.mongabay.com/2016/11/tigers-face-unprecedented-threat-from-transport-projects-wwf/

Coders find creative solutions to conservation challenges in Zoohackathon

The U.S. State Department's inaugural Zoohackathon contest took place last

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October at six zoos worldwide, challenging coders to come up with technological solutions to some of the greatest conservation challenges. The winning team, *Wildtrack*, developed an app that can be used by anyone anywhere in the world to report suspected wildlife crime incidents via an anonymous text message. The app will be integrated with the existing SMART (Spatial Monitoring and Reporting Tool) software, which is already in use in 31 countries. Until now members of the public have not been able to add data to the SMART database, but with the app important first-hand information from witnesses of wildlife crime will be included in real-time data analysis to help protected area managers to track and predict poaching and wildlife trafficking. Further development of the app will be supported by a prize fund of USD 35,000.
Source: ZSL (2016) zsl.org/conservation/news/wildlife-crime-reporting-app-wins-zoohackathon

Bird flu epidemic continues

The H5N8 flu virus continues to kill birds across Europe and the Middle East, with no end in sight to the epidemic. Nine mute swans carrying the virus died at a managed colony in Abbottsbury in the south of England, and 40 other swans may also have died as a result of the virus. The flu has caused the deaths of wild birds across Europe, including white-tailed eagles, peregrine falcons, crows and gulls. The pattern of the spread of the disease, along with weather patterns, has led scientists at the Research Centre for Emerging Infections and Zoonoses in Hannover, Germany, to conclude that the virus is being carried by mallard ducks on their short winter migrations. French authorities announced plans to slaughter c. 800,000 free-range ducks and geese on poultry farms to prevent the further spread of the virus.
Source: New Scientist (2017) newscientist.com/article/mg23331083-600-bird-flu-epidemic-has-spread-across-europe-into-the-uk/

Bamboo sharks at greater risk than previously thought

Bamboo sharks, of which there are nine species, hold a particular fascination for divers because of their unique 'walking' behaviour in shallow waters. The small sharks, less than 1 m in length, are active only at night, when they feed on crustaceans on shallow reefs. Until recently it was believed that the nine species had large overlapping distributions, extending from northern Australia and Papua New Guinea to the Seychelles and the Solomon Islands. However, research has revealed that not only is there no overlap between ranges but the overall range is far smaller than previously understood. Small ranges heighten the species' vulnerability to local threats, such as fishing, rising temperatures and extreme weather events, which could wipe out an entire population. Moreover, newly hatched bamboo sharks have limited swimming ability and are unable to disperse far from their immediate area in search of food.
Source: The Guardian (2016) theguardian.com/environment/2016/dec/01/walking-sharks-at-greater-risk-of-extinction-than-previously-thought

Caged bird trade linked to introduction of alien species

Researchers have analysed a database of alien birds to identify the anthropogenic and environmental factors affecting global spatial and temporal variation in the drivers of alien species introduction and species richness. Almost 1,000 bird species are known to have been introduced to new areas in the past 500 years. Historically, introductions of alien birds were driven largely by European, and mainly British, colonialism, with the deliberate introduction of game birds, such as ducks, geese, grouse and pheasants, into new territories. However, more recently there has been a large increase in the global demand for exotic birds as pets, resulting in more widespread introductions of alien species into the wild. Environmental factors also play a role in determining whether alien bird species will be able to establish thriving populations in new areas. Numerous extinctions of native species, at global and local scales, have been attributed to invasive alien species, which destroy the uniqueness of many natural environments.
Source: PLoS Biology (2017) dx.doi.org/10.1371/journal.pbio.2000942, & *BBC News* (2017) bbc.co.uk/news/science-environment-38585331

EUROPE

Captive breeding plans for Critically Endangered Scottish wildcat...

Recent monitoring suggests fewer than 100 Scottish wildcats now survive in the wild, as isolated individuals or in small groups (see *Oryx*, 49, 207–215). A camera trap project monitored six areas identified as prime wildcat habitat but from 200,000 images only 19 possible cats were identified. The future of this Critically Endangered wildcat may now depend on approximately 80 captive wildcats held in zoos, wildlife parks and private collections throughout the UK. A captive breeding plan aims to establish a genetically diverse population of wildcats suitable for release into the wild. Hybridization with feral or domestic cats means that captive wildcats now have greater genetic purity than those in the wild. Following genetic testing of all captive cats to identify individuals suitable for breeding, genes from cats already in the wild will be introduced, through artificial insemination or through capture of vulnerable, isolated cats. It is hoped that the first trial releases will take place within 5 years.
Source: The Guardian (2016) theguardian.com/environment/2016/dec/26/hopes-for-saving-scottish-wildcat-rest-on-captive-breeding-plan

...and Scotland's woodland birds show signs of recovery

According to a report from Scottish Natural Heritage, populations of woodland and farmland birds in Scotland have increased over the past 2 decades, although there has been a decrease in numbers of upland birds overall. Among the largest population increases recorded were those of the great spotted woodpecker and the chiffchaff, which have increased by 530 and 752%, respectively, since 1994. The causes are not known for certain but may include changes in woodland management practices. Climate change is also improving conditions for some species, including the willow warbler and the tree pipit. Among farmland species, long-term increases have been recorded for the goldfinch, great tit, magpie, corncrake and whitethroat. In contrast, upland birds are declining, although some species are showing positive trends, notably golden eagles (see below), and cuckoos, which have increased by 129% in Scotland despite an overall decline in the UK.
Source: Rare Bird Alert (2016) rarebirdalert.co.uk/v2/Content/BirdLife-Scotlands-woodland-birds-up-two-thirds-since-1994.aspx?s_id=779017613

UK numbers of golden eagles on the rise...

A survey funded by the Royal Society for the Protection of Birds and Scottish Natural Heritage found 508 breeding pairs of golden eagles in Scotland. With this increase of 15% since the previous survey, in 2003, numbers have exceeded the threshold of 500 breeding pairs thought to be necessary for the species to have a viable future in the UK. Scotland's population of golden eagles

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suffered decline in the 1960s as a result of widespread use of organochlorine pesticides, which caused mass infertility. England's last golden eagle went missing in 2016, but Scotland's eagles are benefiting from fewer illegal killings and a greater abundance of prey as grazing on hills by sheep and deer has decreased. Despite rising numbers, golden eagles still occupy just two-thirds of their traditional territories, and in the east of Scotland only 30% of known territories are occupied despite the availability of prey in the area.
Source: The Guardian (2016) theguardian.com/environment/2016/nov/10/uk-golden-eagle-population-soars-to-new-heights

...and seabirds are returning to the rat-free Scilly Isles

There has been a resurgence of Manx shearwaters on two of the Scilly Isles, off the south-west coast of England, following a GBP 750,000 scheme to eradicate rats from the islands. In 2013 the 84 inhabitants of the islands of St Agnes and Gugh cleared out sheds and barns and replaced their refuse bins with new, more sturdy ones that were supplied to each household. Baiting boxes laced with poison were then set for 3 weeks and c. 3,000 rats were killed. Since the rats were removed the number of Manx shearwaters, which are ground-nesting, has almost tripled, with 73 nesting pairs recorded in 2016. Another rare species of ground-nesting bird, the storm petrel, which had not been seen on St Agnes or Gugh in living memory, has also returned to the Scilly Isles since the rats were eradicated. Funding is now being sought to extend the scheme to the islands of Tresco, St Martin's and Bryher.
Source: The Guardian (2016) theguardian.com/environment/2016/oct/21/rare-birds-thriving-on-scilly-isles-after-scheme-rids-islands-of-rats

Foxes flourishing in English cities

According to the findings of a citizen science initiative in 2012, more than 90% of towns in England and Wales that reported having no foxes in 2001 had since become home to them, and foxes are now believed to reside in all cities in the UK. In a follow-up study a team of researchers used radio tagging to investigate the size of fox social groups and the size of their territories, and they enlisted residents of eight cities to report any sightings of foxes in July and August during 2013–2015. The findings indicate that densities of urban foxes in the north of England have increased, and Newcastle is now home to c. 10 foxes per km^2. This contrasts with the overall trend for England, which shows a sharp decline in foxes since 2010, possibly as a result of reduced availability of prey for rural foxes, particularly rabbits and earthworms, and increased shooting pressure from gamekeepers.
Source: New Scientist (2017) newscientist.com/article/2116583-there-are-five-times-more-urban-foxes-in-england-than-we-thought/

Report strengthens the case for neonicotinoid ban

A report that analyses hundreds of scientific studies published since the EU adopted a partial ban on neonicotinoid pesticides in 2013 warns that the pesticides pose widespread risks to agriculture and the environment, making a strong case for extending the scope of the current EU restriction. The partial ban, which excluded the use of neonicotinoids on barley and wheat, and in gardens and public spaces, was introduced on the basis of the significant risks the pesticides pose to bees, but new evidence suggests they may also be linked to declines of butterflies, birds and aquatic insects. Globally, c. 75% of all crops depend on insect pollinators, and more than 90% of the 107 most important crops depend on bees for fertilization. Since their introduction in the mid 1990s neonicotinoids have been widely used, but they have been found to impair reproduction in bees, as well as memory and navigation functions essential for foraging.
Source: Greenpeace (2017) greenpeace.org/international/Global/international/publications/agriculture/2017/neonicotinoid-pesticides.pdf, *& The Guardian* (2017) theguardian.com/environment/2017/jan/12/europe-should-expand-bee-harming-pesticide-ban-say-campaigners

Almost 50% fewer plastic bags found on UK beaches

The introduction of the 5 pence levy on single-use plastic bags across the UK has significantly reduced the number of discarded bags on UK beaches. The annual Great British Beach Clean report, by the Marine Conservation Society, reported just under seven plastic bags per 100 m of coastline cleaned in 2016: an almost 40% drop compared to 2015 figures and the lowest number recorded in the past 10 years. In Wales, where the levy has been in place since 2011, there were just under four bags for every 100 m cleaned, and beaches in England and Northern Ireland saw decreases of more than 50% in the number of plastic bags found, compared with 2015 figures. In total 268,384 items of litter were collected in 2016, a 4% decrease from 2015, but volunteers recorded a 53% increase in the amount of balloon-related litter and a rise of more than 4% in the quantity of drinks containers.
Source: The Guardian (2016) theguardian.com/environment/2016/nov/22/number-of-plastic-bags-found-on-uk-beaches-falls-by-nearly-half

Burgeoning trade in live coral between Indonesia and the Netherlands

Exports of live animals from Indonesia to the Netherlands are thriving but a study has revealed discrepancies in the quantities reported by both countries. Between 2003 and 2013 the wildlife trade monitoring network, TRAFFIC, analysed 1,146 transactions of live individuals of species listed in the CITES Appendices and in the Annexes to the European Union Wildlife Trade Regulations. The export and import figures reported by Indonesia and the Netherlands tallied in only 3.6% of the cases studied. Indonesia reported exporting over 450,000 specimens but the Netherlands recorded imports of just over 340,000 animals. Live corals comprised 98% of the total trade in live animal specimens, and trade of the coral species *Hydnophora microconos* was reported by both countries despite a European Union trade restriction. Countries may report on the number of export permits issued or quotas set rather than the number of specimens traded, which exacerbates data discrepancies.
Source: TRAFFIC (2016) traffic.org/home/2016/11/21/new-study-highlights-significant-discrepancies-in-live-anima.html

Farmers' compensation increases as wolves make a comeback in Madrid

Spain has the largest population of wolves in Western Europe, and after being hunted to near extinction in the last century wolves are now returning to the region of Madrid. As well as mountains, forests and pastures the region has significant areas of farmland, and as the number of wolves has increased so has the frequency of attacks on livestock. The number of wolf attacks increased from fewer than 20 in 2012 to 209 in 2016, and in response Madrid's regional government has announced it will increase compensation payments for farmers who have suffered livestock losses, doubling its compensation budget from EUR 60,000 to EUR 120,000 in 2017. Conservation initiatives such as electric fences to protect livestock, and tracking of wolves using global positioning system technology, are also being explored. With an estimated three wolf packs in the region and increasing numbers in

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surrounding areas, the balance between protecting wolves and farmers' interests is crucial.
Source: The Guardian (2016) theguardian.com/world/2016/nov/28/madrid-to-double-farmers-compensation-fund-for-wolf-attacks

Action plan launched to save the angelshark

A partnership of conservation organizations has launched an action plan to save the Critically Endangered angelshark from extinction. The action plan prioritizes protection of the species in its last remaining stronghold, in the waters around the Canary Islands, although it was once widespread throughout the eastern Atlantic and the Mediterranean Sea. Angelsharks suffered population declines during the past century, mostly as a result of intensive commercial fishing practices. Developed with input from local and international stakeholders, including scientists, conservationists and divers, as well as the Spanish and Canary Islands governments, the plan sets out specific actions and recommendations to mitigate the threats facing the species, the primary threats being bycatch by commercial and recreational fisheries, and habitat loss and degradation. A new angelshark sightings map has also been launched to encourage members of the public to report sightings during dives or fishing trips, or even at fish markets.
Source: ZSL (2016) zsl.org/conservation/news/saving-angels-new- plan-aims-to-conserve-critically-endangered-angelshark

Good news for one of Europe's most threatened songbirds

The Azores bullfinch *Pyrrhula murina* is endemic to São Miguel, an island of the Azores archipelago, and its diet is entirely dependent on endemic plant species, including the near-extinct Azorean plum *Prunus azorica*. In the last 100 years introduced exotic plants have crowded out endemic species, leaving just 2% of the island's native laurel forest intact. The island has been devastated by invasive alien plants, including the Kahili ginger *Hedychium gardnerianum* of India and Nepal, which is recognized as one of the world's worst invasive species. The Azorean bullfinch is now confined to a few km² of fragmented laurel forest. When conservation projects to protect the species began in 2003 the Azores bullfinch was categorized as Critically Endangered on the IUCN Red List. Restoration projects have recovered over 300 ha of laurel forest and peatland habitat, and bullfinch numbers have increased as a result. In the 2016 Red List update the species was recategorized as Vulnerable.
Source: BirdLife International (2016) birdlife.org/worldwide/news/azore-glory-europes-most-threatened-songbird-rebounds

Double threat to southern Europe's largest lake

Environmentalists in Montenegro are opposing proposed developments they claim will threaten the largely pristine Lake Skadar, which the country shares with neighbouring Albania. The lake, which is home to more than 280 species of birds and almost 50 fish species, is listed as a Wetland of International Importance under the Ramsar Convention and is the westernmost breeding ground of the Vulnerable Dalmatian pelican. Proposed hydropower projects on the river Moraca, which provides most of the lake's water and is itself rich in biodiversity, could destroy up to 20% of bird nesting habitat in the northern part of the lake. Meanwhile, critics say the construction of an eco-resort on the shores of the lake will disturb fish and nesting birds, and polluted wastewater from the resort, which is planned for completion in 2019, could threaten the ecosystem of the lake.
Source: New Scientist (2017) newscientist.com/article/2116873-largest-lake-in-southern-europe-under-threat-from-eco-resort/

NORTH EURASIA

Belarus to restore peatland in Białowieża Forest

A UNESCO World Heritage Site, Białowieża Forest lies between Poland and Belarus and is one of Europe's last primeval forests. The forest is a unique habitat for 250 bird species, including the aquatic warbler *Acrocephalus paludicola*, the greater spotted eagle *Clanga clanga* and the great snipe *Gallinago media*. Sixty years ago a 7,000-ha fen at the eastern edge of the forest was drained as part of a reclamation campaign. A new conservation initiative led by APB BirdLife Belarus, the National Park authorities and the Frankfurt Zoological Society is now aiming to restore 1,163 ha in the central area of the forest. The fens of Białowieża Forest are crucial not only as habitats but as carbon sinks and flood protection. Over the past decade up to 50,000 ha of peatlands have been rewetted in Belarus and, with the construction of 112 natural dams, this project will be one of the largest fen rehabilitation projects in Europe.
Source: BirdLife International (2016) birdlife.org/europe-and-central-asia/news/belarus-restore-over-1000-hectares-peatland

Kyrgyz president champions snow leopard conservation

Kyrgyzstan's President Almazbek Atambayev has been a strong advocate for snow leopard conservation since taking office in 2011, making the country a focal point for conservation of this elusive species. His commitment is exemplified by the creation of Shamshy Wildlife Reserve in what was formerly a hunting concession, based on an innovative model of co-management by the government, local communities, and conservation NGOs, including the Snow Leopard Trust, and incorporating research, education and eco-tourism initiatives. Camera traps have provided evidence of the presence of snow leopards in Shamshy, as well as the first confirmation of the species in the Kyrgyz Ala-Too mountain range, which spans almost the entire country from north to south. Although, at 200 km², Shamshy is barely large enough to protect the entire range of a single snow leopard, such reserves are important if they are connected to other areas of protected habitat.
Source: The Guardian (2017) theguardian.com/environment/radical-conservation/2017/jan/10/snow-leopards-shamshy-atambayev-kyrgyzstan-wildlife-poaching

NORTH AFRICA AND MIDDLE EAST

Overfishing decimates numbers of sharks and rays in the Mediterranean

The 2016 IUCN regional assessment of the Mediterranean Sea evaluated the status of 73 species of sharks and rays in the region and reported that more than 50% are threatened with extinction. The status of 11 species, including the smooth hammerhead, blue, white and basking sharks, have all worsened by at least one Red List category since the last assessment, in 2007. Thirteen species have become locally extinct in the Mediterranean in the last 50 years, and the status of the remaining sharks and rays is cause for concern. Of the 73 species assessed, 11 are Endangered and 20 are Critically Endangered. Insufficient data on 13 species means that the level of threat could be higher. Overfishing is the main threat in the region, as illegal drift nets continue to be used extensively, and shark and ray species are

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often taken unintentionally as bycatch by fisheries for other species.
Source: Mongabay (2016) news.mongabay.com/2016/12/over-50-of-sharks-and-rays-in-the-mediterranean-sea-are-at-risk-of-extinction/

Peace deal could threaten wildlife in Cyprus buffer zone

The potential reunification of Cyprus raises questions about what will become of the rare species flourishing in the United Nations buffer zone that runs 180 km east to west along the island, separating the regions administered by Turkish and Greek Cypriots. The buffer zone has been largely abandoned for 4 decades, providing a haven for wildlife, including the Cyprus mouflon, an endemic wild sheep that has declined across the island but is found in high numbers inside the zone. A biodiversity survey in the buffer zone in 2007 recorded 18 mammal and 358 plant species, 13 of which are endemic. Another survey recorded the rare Cyprus tulip and Cyprus bee orchid, the Eurasian stone curlew and the northern lapwing. The potential loss of habitat in the event of reunification, as people reclaim their land, poses a threat to the wildlife there, and NGOs have proposed that the area be protected as a national peace park.
Source: New Scientist (2017) newscientist.com/article/2117743-cyprus-reunification-may-harm-unique-wildlife-thriving-on-border/

Invasive parakeets cause decline in Israel's hoopoe population

Invasive ring-necked parakeets *Psittacula krameri* breed earlier in the year than Israel's native hoopoes, so by the time native birds begin to search for a place to nest, all available tree cavities may be occupied. Researchers studied densities of hoopoes in four palmeries in rural Israel over a period of 10 years and discovered that the hoopoe density remained unchanged only in the two palmeries where parakeets were absent. In the two palmeries that had been invaded by parakeets, in 2000 and 2006, the team recorded a substantial decline in hoopoe population density. The parakeet's aggressive colonization of cavities in palm trees also threatens other native species, including nuthatches, starlings and great tits. The competition for nesting holes and resultant decline in hoopoe numbers is not representative of hoopoe populations across Europe, however. In many areas ring-necked parakeets breed in urban areas, which are not usually frequented by hoopoes.
Source: New Scientist (2016) newscientist.com/article/2116572-invasive-parakeets-muscle-in-on-native-birds-nests-in-israel/

Deep sea surveys reveal life in Lebanon's submarine canyons

A month-long deep sea expedition in previously unexplored areas of the Mediterranean Sea was launched as part of Lebanon's Marine Protected Areas strategy. A remotely operated robot was used to survey areas down to a depth of 1,050 m in a system of submarine canyons that is believed to be the most complex in the Mediterranean. Over 200 species were identified, including new records of species previously reported only in the Atlantic Ocean and in polar regions. The lantern shark *Etmopterus pusillus* was recorded for the first time in the Mediterranean and the longnosed skate *Dipturus oxyrinchus* was also seen for the first time in the Levantine Sea. The results of the survey will be used to inform the creation of a national network of protected areas, to fulfil Lebanon's commitments under the Convention on Biological Diversity.
Source: IUCN (2016) iucn.org/news/over-200-species-found-during-deep-sea-surveys-submarine-canyons-lebanon

Multiple species collapses in the eastern Mediterranean

A survey of shallow-water habitats in the eastern Mediterranean has found that a number of once abundant marine species have vanished from the region in recent decades, including the red-mouthed rock shell. This shellfish was one of the main sources of the dye Tyrian purple, which was one of the most valuable products traded in the ancient world. Coastal waters are potentially a hotspot for species extinctions, having undergone exceptional warming in the past 3 decades, which may have pushed many invertebrate species beyond their physiological tolerance limits. The survey found evidence of major population collapses of two urchin species and two gastropods, and failed to find 38 of 59 mollusc species that were once common on reefs in the Levant basin. Furthermore, molluscan assemblages were dominated by non-native species. The findings may indicate the beginning of a range contraction for multiple species in the south-eastern Mediterranean.
Source: Nature Scientific Reports (2016) dx.doi.org/10.1038/srep36897, & *The Guardian* (2016) theguardian.com/environment/2016/dec/05/ancient-shellfish-red-mouthed-rock-shell-purple-dye-vanishes-eastern-med

Leopards forced to venture further as human encroachment continues

Arabian leopards are Critically Endangered, with an estimated 200 individuals remaining in the wild. The largest population is in Oman, where recent camera-trap and scat surveys have estimated there are up to 58 individuals. The Dhofar mountains are rich in biodiversity and are critical habitat for leopards, but they are also important rangelands for livestock. Overgrazing and desertification are limiting the space available for Arabian leopards, and records show they are being displaced into new areas. Leopards in the Jabal Samhan Nature Reserve are moving southwards, whereas in areas to the north-west of the Dhofar mountains leopards are moving north, back to areas where they have not been found for a decade. The displacement may be partly as a result of the influx of people entering the area to harvest frankincense. Semi-permanent camps are constructed near water sources and disturb both leopards and their prey.
Source: New Scientist (2016) newscientist.com/article/2115755-rare-arabian-leopards-forced-out-by-frankincense-harvesters/

SUB-SAHARAN AFRICA

Thermal imaging technology helps fight poaching

Since the introduction of thermal infrared camera technology in the Maasai Mara reserve in March 2015 rangers have arrested more than two dozen poachers who might otherwise have evaded detection under cover of darkness. The technology can detect poachers from up to a mile away by their body heat, meaning that rangers can now search for poachers 24 hours per day, using streaming video to guide them through the darkness to where poachers have been detected. The technology, which was installed as part of WWF's Wildlife Crime Technology Project, is one of the first applications of forward-looking infrared technology outside the military and law enforcement, and WWF is now working with partners to expand the use of thermal imaging technology to anti-poaching drones.
Source: WWF (2016) worldwildlife.org/stories/new-anti-poaching-technology-leads-to-dozens-of-arrests-of-wildlife-criminals-in-africa

Chimpanzees make drinking sticks

Researchers have used camera traps to film tool-use that is unique to the Critically Endangered western chimpanzee *Pan*

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troglodytes verus. Chimpanzees in Comoé National Park, Côte d'Ivoire, were filmed making water-dipping sticks by chewing the ends of sticks to turn them into soft, water-absorbing brushes, which they used to dip for water from tree holes. Using similar brush-tipped sticks to dip into bees' nests for honey is common in chimpanzee populations across Africa but the use of brush-tipped sticks to dip for water has never been described before. The long brush tips made specifically for water are much longer than those used for honey. This technology allows chimpanzees in Comoé to obtain water from extremely narrow, deep tree holes that only they can exploit. The use of sticks for dipping for water is shared throughout this group, indicating cultural transmission.
Source: American Journal of Primatology (2016) dx.doi.org/10.1002/ajp.22628, and *BBC News* (2016) bbc.co.uk/news/science-environment-38524671

Investigation of complaint of human rights abuses against WWF

A complaint of human rights abuses against WWF is to be examined by the Organisation for Economic Co-operation and Development (OECD). Government anti-poaching guards in the Cameroon rainforests, part-funded and logistically supported by WWF, are alleged to have destroyed camps and property belonging to the hunter-gatherer Baka people. The guards are accused of using physical force and threats of violence against the Baka people. Survival International has submitted a formal complaint to the OECD in Switzerland, where WWF International is based, alleging that the Baka were also denied access to their ancestral lands after the Cameroon government established protected areas with the support of WWF. It is the first time the conduct of an international charity has been scrutinized under the OECD's guidelines for multinational enterprises. WWF has voluntarily agreed to the mediation although it has disagreed with using the guidelines as a mechanism for resolving issues between two non-profit organizations.
Source: The Guardian (2017) theguardian.com/environment/2017/jan/05/oecd-to-examine-complaint-against-wwf-over-human-rights-abuses-in-cameroon

World's largest peatland could store the equivalent of 3 years' worth of global fossil fuel emissions

Newly mapped peatlands in the central Congo basin cover an area of 145,500 km². The Cuvette Centrale peatlands hold nearly 30% of the world's tropical peatland carbon and despite covering just 4% of the whole Congo basin they store the same amount of carbon as do the trees covering the remaining 96%. According to researchers the Democratic Republic of Congo and the Republic of Congo are now the second and third most important countries for tropical peat carbon stocks, after Indonesia. These peatlands have been building up carbon stocks for almost 11,000 years and their remote location has ensured they are relatively undisturbed. Protection of this newly discovered, almost pristine peatland will be crucial not only for combatting climate change but also for safeguarding the habitats of threatened species, including forest elephants and lowland gorillas.
Source: The Guardian (2017) theguardian.com/environment/2017/jan/11/worlds-largest-peatland-vast-carbon-storage-capacity-found-congo

Conservation successes for two endemic birds

Two birds previously categorized as Critically Endangered on the IUCN Red List—the St Helena plover *Charadrius sanctaehelenae* and the Montserrat oriole *Icterus oberi*—have been recategorized as Vulnerable following conservation in UK Overseas Territories. The St Helena plover is the only survivor of nine endemic bird species on the island. Development, invasive plants, cats, rats and myna birds were the greatest threats to this ground-nesting bird. Following feral cat and rat control, weeding of pastures and implementation of rotational grazing patterns, numbers of the St Helena plover are at their highest since counts began in the 1990s. Invasive species have also plagued the Montserrat oriole, as habitats and nests have been destroyed by feral pigs and rats. Volcanic activity on Montserrat has decimated the oriole's habitat, but decreased activity since 2010 combined with active management of invasive species and the designation of oriole strongholds as protected areas has seen its numbers rise.
Source: BirdLife The Magazine (2016) pp. 22–25

New species of dwarf lemur described...

Studies on the genetic diversity of lemurs at the Grewcock Center for Conservation and Research at Omaha's Henry Doorly Zoo and Aquarium in Omaha, Nebraska, USA, have resulted in the identification of a new species: Sheth's dwarf lemur. *Cheirogaleus shethi* is the smallest member of the *C. medius* group, which also comprises the fat-tailed dwarf lemur *C. medius* and Thomas's dwarf lemur *C. thomasi*. It is named after philanthropist Brian Sheth, known particularly for his support to the NGO Global Wildlife Conservation of Austin, Texas. The species occurs in the dry and transitional forests along the forest corridor from Ankarana Special Reserve, east to the Analamerana Special Reserve and down to the Bekaraoka forest in the Loky-Manambato Protected Area in northern Madagascar.
Source: Primate Conservation (2016) primate-sg.org/storage/pdf/PC30_Frasier_et_al_Cheirogaleus_shethi.pdf

...as ring-tailed lemurs suffer severe decline in the wild

According to two independent studies there may be as few as 2,000 ring-tailed lemurs remaining in the wild. This represents a 95% decline since the last known population estimate, in 2000. The ring-tailed lemur, one of Madagascar's best known and most charismatic species, is categorized as Endangered on the IUCN Red List and is under pressure from habitat loss and bushmeat hunting. The species has also been heavily targeted for the illegal pet trade. There are now more ring-tailed lemurs in zoos than in the wild, and zoos will play an important role in conservation efforts for the species, through captive breeding and raising awareness of the species' plight among members of the public. It is hoped that these latest findings will help to mobilize funding for conservation of the species, which has received limited funding in the past because it was thought to be faring well.
Source: Conservation International (2017) blog.conservation.org/2017/01/wild-ring-tailed-lemur-population-has-plummeted-95-since-2000/?_ga=1.218408606.622398279.1453301586

SOUTH AND SOUTH-EAST ASIA

South-east Asia's expanding population puts increasing pressure on biodiversity

A study has identified habitat loss and hunting and trade as the two leading drivers of biodiversity loss in the Asian tropics. In the last 15 years alone South-east Asia has lost 14.5% of its forests, and some areas, including parts of Indonesia, are expected to lose up to 98% of their forests by 2022. South-east Asia is the source of almost 90% of the global supply of palm oil and pulp and paper, and huge swathes of

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forest are being converted to plantations. According to the study, the total area used for rubber plantations alone is projected to expand by 4.3–8.5 million ha by 2024. Up to 45% of intertidal wetlands have already been lost and an estimated 80% of remaining wetlands are threatened by drainage or conversion to agricultural land. The growth of the cement industry is threatening unique karst ecosystems, and wildlife trade is compounding the problems caused by rapid development.
Source: Ecosphere (2017) dx.doi.org/10.1002/ecs2.1624, & *Mongabay* (2017) news.mongabay.com/2017/01/new-study-analyzes-biggest-threats-to-southeast-asian-biodiversity/

Cooking competition promotes sustainable consumption for the lunar new year

The wildlife trade monitoring network, TRAFFIC, joined forces with Viet Nam's Centre for Women and Development to promote the consumption of only legal and sustainably sourced food during celebrations for the lunar new year, and year-round. In Viet Nam wildlife products, including rhinoceros horn, have traditionally been consumed or offered as gifts on special occasions. At a cooking competition in Hanoi in January women in the business community received guidance on implementing corporate social responsibility policies, and learned about actions they could take to reduce wildlife crime and the demand for threatened wildlife. The event recognized the important role of women in tackling the illegal wildlife trade, given their significant influence within family units as providers, protectors and educators. A study in 2013 found that a significant portion of consumers and buyers of rhinoceros horn in Viet Nam were women.
Source: TRAFFIC (2017) traffic.org/home/2017/1/11/cooking-up-a-storm-to-encourage-legal-and-sustainable-foods.html

Assessing Viet Nam's bear trade more than a decade after ban imposed

According to a study led by TRAFFIC, Viet Nam has experienced only a moderate decline in the open availability of bears, bear parts and derivatives since a ban on their sale was introduced in 2006. The legislation made it illegal to hunt, keep, transport, advertise, sell, purchase and consume bear species, their parts or derivatives but the illegal market in Viet Nam is still widespread. Data from a survey of shops in six cities across the country has revealed that raw bear bile was the most prominent product openly available, despite traders demonstrating awareness of the illegal nature of this trade. Of the 70 traditional medicine and other outlets surveyed in 2016, 40% had bear products for sale, a drop of 16% since 2012. Although the research indicated that bile farming is in decline in Viet Nam the sale of wild-sourced products is cause for concern.
Source: TRAFFIC (2016) traffic.org/home/2016/11/17/viet-nams-illegal-bear-trade-persisting-more-than-a-decade-a.html

Female-led beekeeping project saves mangroves in Viet Nam

The clearing of mangrove forests in Viet Nam for shrimp farming has decreased the resilience of coastal communities and stripped the ecosystem of the valuable protection and habitat that mangroves provide. Many of the women in Tien Lan District, Viet Nam, rely on agriculture and aquaculture for their income. Through a project supported by the Mangroves for the Future initiative, women in Hai Phong City have invested micro-loans in training and equipment in sustainable bee-keeping. The project was designed and implemented by the Tien Lang Women's Union, and at the end of the project all 20 households agreed to contribute to a development fund for mangrove protection and to expand the project further. Entirely managed by women, the project resulted in a reported increase in annual income of approximately VND 11 million (c. USD 500) for 85% of households participating in apiculture production.
Source: IUCN (2016) iucn.org/news/queens-bees

Rare wild turkey caught on video for the first time

Recent camera trap surveys in the rainforests of Raja Ampat archipelago in West Papua, Indonesia, have yielded the first ever video footage of the Endangered Waigeo brush turkey *Aepypodius bruijnii*, which is found only in a small area of Waigeo, the largest of the four main islands. There were no records of the elusive bird throughout the latter part of the 20th century but it was rediscovered in 2002, and photographed for the first time in the wild in 2007. The Waigeo brush turkey is just one of many species that are unique to the richly biodiverse forests of Raja Ampat, which are under pressure from infrastructural development, illegal logging, mining, and the development of plantations. With financial support from the German government, Fauna & Flora International has been working with conservation and government partners in the region to develop sustainable livelihoods, including community-based ecotourism and agroforestry initiatives, and to tackle illegal logging and wildlife trade.
Source: FFI (2016) fauna-flora.org/news/first-ever-footage-of-rare-wild-turkey-provides-early-christmas-present/

Nickel mining and starfish threaten health of marine ecosystems in Sulawesi Province

The coastlines and waters of South East Sulawesi Province are home to over 93 species of ornamental fish, 20 species of mangroves, and a number of threatened species, including the hawksbill and loggerhead sea turtles. Approximately 75% of the Province's territory lies offshore and fishing is crucial to the Province's economy, providing an annual catch of up to 542,000 tons of fish. Analysis of coral reef conditions in Lasolo Bay Marine Nature Recreation Park, the South East Sulawesi Marine Protected Area (Kabupaten Konawe), and non-protected waters around Wawonii Island has revealed that almost 25% of the Province's reef ecosystem is badly damaged. Nine of 38 sampling sites had less than 25% coverage of hard coral, a type of foundation coral necessary for a healthy reef ecosystem. Researchers hypothesize that run-off from the nickel mining industry in the region could be causing detrimental impacts, including high levels of sedimentation. Effects are exacerbated by a recent outbreak of coral-eating crown-of-thorns starfish.
Source: Mongabay (2016) news.mongabay.com/2016/12/expedition-finds-serious-damage-to-southeast-sulawesis-marine-ecosystem/

EAST ASIA

New stronghold for one of the world's rarest seabirds

The Critically Endangered Chinese crested tern *Thalasseus bernsteini*, Asia's rarest seabird and possibly the rarest seabird in the world, had been assumed to be extinct since 1937 before it was rediscovered 16 years ago on the east coast of mainland China. The tern was recently discovered breeding in the Korean Peninsula during a routine survey undertaken by the National Institute of Ecology of Korea. The Chinese crested tern had never before been recorded in South Korea and the global population of the species was estimated to be fewer than 100 individuals. Two nesting pairs were sighted amongst a breeding colony of black-tailed gulls *Larus crassirostris* and

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researchers immediately requested that the Ministry of Environment restrict all civilian access to the site until breeding success was confirmed, in an effort to safeguard the future of the species.
Source: BirdLife International (2017) birdlife.org/asia/news/tern-better

China to ban domestic ivory trade by end of 2017

At the close of 2016 the General Office of the State Council of China announced that China would cease all ivory processing and sales by 31 December 2017. China is the world's largest legal ivory market, and the ban signals China's support for international efforts to tackle the poaching crisis in Africa. An estimated 20,000 elephants are killed illegally across Africa each year, primarily to meet the demands for ivory from markets in Asia, and particularly China. It is hoped that as three of the world's most prominent domestic ivory markets—China, Hong Kong and the USA—are now set to phase out their ivory markets, the impacts will be felt throughout the ivory trafficking network. Researchers warn that awareness raising campaigns and collaborations with governments, conservation organizations, local communities and the private sector should continue concurrently with implementation of the ban to reduce demand for ivory within China.
Source: TRAFFIC (2016) traffic.org/home/2016/12/31/china-to-ban-domestic-ivory-trade-by-end-of-2017-in-huge-boo.html

New primate species discovered in China's tropical forests

Scientists have confirmed that gibbons they had been studying in the forests of south-west China are a new species, named the Skywalker hoolock gibbon *Hoolock tianxing*. The species has distinct physical markings and songs, which prompted the scientists to carry out a full physical and genetic comparison with other wild gibbons and museum specimens to evaluate the taxonomic status of the gibbons in the Gaoligongshan nature reserve. There are estimated to be c. 200 Skywalker gibbons in China, and an unknown number in neighbouring Myanmar, and based on the small population size and the threats they face from habitat loss, fragmentation and hunting the researchers consider they should be categorized as Endangered under IUCN Red List criteria. Many small apes in southern China and South-east Asia are at risk of extinction, and the discovery of the new species highlights the need for improved conservation of these animals.
Source: American Journal of Primatology (2017) dx.doi.org/10.1002/ajp.22631, & *BBC News* (2017) bbc.co.uk/news/science-environment-38576819

Concerns over snow and common leopards found in same area

The first ever video footage showing Endangered snow leopards and Vulnerable common leopards sharing the same habitat has caused concern about the future of the snow leopard if common leopards begin to live at higher elevations in a warming climate. The video came from a camera trap in Qinghai province, China, showing the two species at the same location in July 2016. One of the videos shows a female common leopard with a cub, potentially indicating that the individuals were resident. Snow leopards live above 3,000 m in typically open and rocky areas, whereas common leopards' habitats include forests and woodlands at lower elevations. The lower reaches of the snow leopard's habitats and the upper limits of the common leopard's range overlap in the Himalayas and other Asian high mountains, but climate change could complicate this. As the upper tree line moves higher, current snow leopard habitat will be lost as the alpine zone shrinks.
Source: BBC News (2017) bbc.co.uk/news/science-environment-38610862

Japan's largest coral reef hit by bleaching

According to the Japanese environment ministry, 70% of Japan's largest coral reef, in Sekisei lagoon in Okinawa, has died as a result of bleaching. The 400 km² reef is a popular diving spot. A survey of 35 sites in the lagoon in November and December found that the dead coral had turned brown and was fully colonized by algae. The speed at which coral bleaching is occurring is alarming, as a similar survey conducted in September and October found that just over 56% of the reef had died. The mean sea surface temperature in summer 2016 in the southern portion of the Okinawa island chain was 30.1°C, the highest since records began in 1982. It is this unusually warm temperature that has caused such widespread and rapid coral bleaching, which occurs when the algae known as zooxanthellae are expelled from the coral tissues. The coral eventually dies from lack of nutrition if the water temperature does not return to normal.
Source: The Guardian (2017) theguardian.com/world/2017/jan/12/almost-75-of-japans-biggest-coral-reef-has-died-from-bleaching-says-report

NORTH AMERICA

Why are shorebird populations shrinking?

Since 1973 shorebird populations have declined by c. 70% across North America. On Southampton Island in the Canadian Arctic researchers have been tagging and tracking the rufa red knot *Calidris canutus rufa*, which breeds in the Arctic. The rufa red knot has declined by 75% since the 1980s. Identifying reasons for population declines is complex, as shorebirds migrate thousands of kilometres each year. In the Arctic, red knots are threatened by changing climate and an influx of snow geese *Chen caerulescens*, which trample potential nesting habitat. Research in the Russian Arctic has found that red knots produce smaller offspring when the snow melts earlier, as the shorebirds could be missing periods of peak insect emergence. During their migration from South America red knots rely on the energy-rich eggs of horseshoe crabs *Limulus polyphemus*, but researchers are concerned that overharvesting of the crabs in Delaware Bay is depriving the birds of this food source.
Source: Nature (2017) nature.com/ news/what-s-killing-the-world-s-shorebirds-1.21232

Conservationists welcome decision to deny seismic survey permits in Mid and South Atlantic. . .

In January the U.S. Bureau of Ocean Energy Management announced its decision to deny six applications for permits to conduct airgun seismic surveys for oil and gas exploration in the Mid and South Atlantic waters of the United States. The decision was welcomed by the Wildlife Conservation Society and other conservation partners, who had written to President Obama last June to petition against granting the permits for seismic surveys in important marine habitats. The coastal areas for which the survey permits were sought are important wintering and calving grounds for the North Atlantic right whale, one of the most threatened whale species, of which there are only an estimated 500 individuals remaining. These whales, which are already under significant pressure from a high level of human activity in the area, would have been exposed to additional stress from airgun blasts, which could disrupt essential communication between individuals.
Source: WCS (2017) newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/9655/GREAT-START-FOR-2017-WCS-

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Applauds-US-Bureau-of-Ocean-Energy-Management-For-Denying-Seismic-Survey-Permits-in-Mid-and-South-Atlantic-Waters.aspx

. . .and government plan for polar bear conservation. . .

Also in January, the U.S. Fish & Wildlife Service introduced a plan to guide polar bear recovery under the Endangered Species Act. The Polar Bear Conservation Management Plan focuses on actions for the two U.S. subpopulations, in the Chukchi and Beaufort Seas, and was developed with input from multiple stakeholders, including representatives from federal agencies, NGOs, scientists and industry leaders. The polar bear plays an important role in the health of the marine environment and the Arctic ecosystem, which is threatened by rising temperatures and the loss of sea ice, on which polar bears depend for nourishment, rest, breeding and movement. The effects of these environmental changes include scarcity of prey, population fragmentation and human–wildlife conflict. The Alaska Department of Fish and Game welcomed many aspects of the plan but remains opposed to the polar bear's listing as threatened on the basis that the population is close to its historical baseline.
Source: WWF (2017) worldwildlife.org/stories/us-government-releases-a-new-plan-to-protect-polar-bears, & *ADF&G* (2017) adfg.alaska.gov/index.cfm?adfg=pressreleases.pro1092017

. . .hot on the heels of protection of Arctic waters

In December President Obama announced permanent protection for c. 46 million ha in the Arctic, placing the area off limits to oil and gas exploration and production. The protected waters, in the Beaufort and Chukchi Seas, are of cultural importance to indigenous communities and are home to important wildlife species, including walruses, polar bears and whales. Under a 1953 law U.S. presidents can block the sale of new offshore drilling and mining rights, and it is difficult for such decisions to be reversed by their successors. President Obama announced the move in a joint statement with the Canadian prime minister, Justin Trudeau, who approved moratoriums on commercial fishing in the Beaufort Sea and on new leases for offshore oil and gas production in Canada's Arctic waters.
Source: WWF (2016) worldwildlife.org/stories/us-permanently-protects-some-of-the-arctic-s-most-important-marine-areas, & *The Guardian* (2016) theguardian.com/us-news/2016/dec/20/barack-obama-bans-oil-gas-drilling-arctic-atlantic

U.S. grasslands rapidly disappearing as land is converted to cropland

A report from WWF has revealed that U.S. grasslands are being lost at a rapid rate, with only 50% of the Great Plains' original grasslands remaining intact. Grasslands are being replaced with annual crops, including alfalfa, wheat, corn and soy, and in 2015 alone an estimated 1.5 million ha of the Great Plains was converted to cropland. Since 2009, c. 21 million ha have been converted to cropland, and in 2014 the region lost more grassland than the Brazilian Amazon lost rainforest. The report indicates that numbers of pollinators are declining, with one in every four species of North American bumble bee now at risk of extinction. Populations of grassland birds have also declined by as much as 80% since the 1960s, as their key habitats have been converted to agricultural land.
Source: Mongabay (2016) news.mongabay.com/2016/12/grasslands-in-us-great-plains-are-being-destroyed-at-alarming-rate/

First bumblebee species added to U.S. Endangered Species List

The rusty patched bumblebee *Bombus affinis* became the first wild bee to be given federal protection in the continental USA when it was added to the U.S. Endangered Species List in January. Once common across much of North America, the bee has declined by almost 90% since the late 1990s and is deemed to be at risk of extinction across most of its range. A number of factors have been blamed for this decline, including habitat loss, pesticides, climate change and disease. Bumblebees, as distinct from domesticated honeybees, provide essential pollination services for wild flowers and c. one-third of all crops grown in the USA, where pollination services provided by insects, mostly bees, are estimated to be worth USD 3 billion annually. According to IUCN, there are 47 native bumblebee species in the USA and Canada, and more than a quarter of them are at risk of extinction.
Source: The Guardian (2017) theguardian.com/environment/2017/jan/11/first-us-rusty-patched-bumble-bee-species-listed-endangered-numbers-plummet

Four new protected areas in Mexico. . .

In December the President of Mexico, Enrique Peña Nieto, announced the establishment of four new protected areas, bringing the total protected area in Mexico to 91 million ha. Three of the new protected areas will be marine Biosphere Reserves, which will increase global marine protection to 23%, more than doubling the 2020 target of the Convention on Biological Diversity to protect 10% of coastal and marine areas. The Reserves will protect important habitats in the Pacific and Caribbean, including extensive areas of the Meso-American Barrier Reef, and deep-water environments in the Pacific. Mexico has also established five new *Zonas da Salvaguarda* (safeguard zones), where exploration and extraction of hydrocarbons are prohibited. These zones include all of the country's Ramsar sites and mangrove forests.
Source: IUCN (2016) iucn.org/news/mexico-declares-four-new-protected-areas

. . .and a new, rare plant species

Botanists have described a new plant species, known only from a remote area of Baja California, Mexico. The tiny succulent has been named Hendrix's liveforever *Dudleya hendrixii*, after the musician Jimi Hendrix. There are estimated to be only 5,000–10,000 individuals of the plant, restricted to an area of c. 1 ha of Colonet Mesa, which is known for its rich plant diversity. *Dudleya* species are hardy plants but the new species is particularly vulnerable to threats from farming and livestock grazing because of its restricted range. The entire population could be wiped out by a tractor or off-road vehicle. The NGO Terra Peninsular is working to protect the Colonet Mesa region, and it is hoped that the discovery of the new species will support their efforts to acquire land for conservation purposes.
Source: Madroño (2016) dx.doi.org/10.3120/0024-9637-63.4.359, & *Scientific American* (2017) blogs.scientificamerican.com/extinction- countdown/endangered-plant-jimi-hendrix/

SOUTH AMERICA

New hope for Critically Endangered blue-throated macaw

A unique approach to ending illegal poaching of macaws in Bolivia has saved over 6,000 individuals of four species since its inception in 2010. This is particularly good news for the blue-throated macaw *Ara glaucogularis*, one of South America's rarest parrots. The Alternative Feather Programme run by the Bolivian conservation organization Asociación Armonia promotes the use of artificial tail feathers in the headdresses worn by the Moxeño people.

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The programme involves educational workshops on the importance of protecting macaws and empowers local craftsmen and women to preserve their heritage and culture. The Moxeños have embraced the use of artificial feathers, as they consider themselves to be the guardians of nature. Also, a new roosting site for the blue-throated macaw has been discovered in forest 40 km north of the Barba Azul Nature Reserve, which is home to the world's largest concentration of macaws.
Source: BirdLife International (2017) birdlife.org/americas/news/new-hope-blue-throated-macaw

AUSTRALIA/ANTARCTICA/ NEW ZEALAND

Threatened seabirds recover as island declared pest-free

Rats, cats and rabbits were introduced by sealers to Macquarie Island, 1,742 km south of Tasmania, in the late 19th century. By 2000 only rabbits remained and their grazing had destabilized the island's soil enough to cause landslides, destroying potential seabird nesting habitats. For species nesting in burrows this was catastrophic and for the Antarctic tern it meant descending to the rocky beaches to nest. The calicivirus disease was imported to eradicate the rabbit population and now, 5 years after the last rabbit was killed, threatened seabirds are showing signs of recovery. The black-browed albatross, light-mantled sooty albatross, Antarctic prion and white-headed petrel have been recategorized from Endangered to Least Concern. The southern diving petrel and south Georgian diving petrel have been recategorized from Vulnerable to Least Concern, and the grey-headed albatross has been recategorized from Critically Endangered to Endangered.
Source: The Guardian (2016) theguardian.com/environment/2016/nov/19/threatened-seabirds-begin-to-recover-on-macquarie-island-after-pests-eliminated

New Zealand successfully eradicates invasive butterfly...

As part of a national plan to remove all introduced pests in New Zealand, the Department of Conservation has initiated a campaign to eradicate the invasive great white butterfly *Pieris brassicae,* first sighted in New Zealand in 2010. Found in Europe, Africa and Asia, the caterpillars of the great white butterfly feed on brassica crops. This invasive butterfly poses a threat not only to crops including cabbage, broccoli and cauliflower but also to native cress species, of which 72% are at risk of extinction. During 2010–2014 the butterfly was targeted with insecticide spray and predatory wasps. Children were encouraged to join the effort, with a reward of NZD 10 being offered for every dead great white butterfly brought in during the spring school holidays. The campaign finished in December 2014 and has been declared successful as, after extensive searches, no great white butterflies have been identified in the last 2 years.
Source: New Scientist (2016) newscientist.com/article/2114573-new-zealand-is-the-first-country-to-wipe-out-invasive-butterfly/

...and takes a leadership role in global efforts to tackle invasive species

Following the launch of the Honolulu Challenge at the 13th meeting of the Conference of the Parties to the Convention on Biological Diversity last November, New Zealand committed to eradicating all invasive alien species from island nature reserves by 2025, and clearing the country of three of its most destructive alien predators (possums, rats and stoats) by 2050. The country's Conservation Minister announced that New Zealand would also take a leadership role in the global initiative to tackle invasive alien species, which are among the most serious threats to biodiversity, and has called on global leaders to make commitments to help eradicate and control the spread of invasive species of flora and fauna, which have been introduced, intentionally or otherwise, into areas outside their natural range—a problem that has increased significantly with globalization and the increased movement of people and goods.
Source: IUCN (2106) iucn.org/news/global-initiative-calls-urgent-action-against-invasive-alien-species & iucn.org/news/iucn-welcomes-new-zealand-leadership-invasive-species

New Zealand hosts an archive of birdsong lost in Britain

Comparison of yellowhammer accents in the UK and New Zealand has revealed that dialects now unheard in Britain are still prevalent in New Zealand. The yellowhammer is native to Britain but was introduced to New Zealand in the 1860s and 1870s, where it later became a pest. To aid comparison between the birdsong in the two countries, researchers encouraged volunteers to submit recordings of singing yellowhammers on their smartphones and cameras. According to the findings, yellowhammers in New Zealand have twice as many dialects as those in Britain, suggesting that birds in New Zealand may have retained song structures that originated in the UK. The decline in yellowhammer numbers in the UK could be the reason for the disparity in dialects between native and introduced populations, as the calls of yellowhammers are now less common in the UK.
Source: The Guardian (2016) theguardian.com/environment/2017/jan/12/lost-british-birdsong-discovered-in-new-zealand-birds

Ross Sea marine reserve agreed

The 24-nation Commission for the Conservation of Antarctic Marine Living Resources has reached a unanimous agreement to protect 1.55 million km² of Antarctica's Ross Sea, one of the world's most pristine marine ecosystems. The marine reserve, which will come into force in December, will be the world's largest and will protect globally important ocean habitats and a diversity of wildlife species, including Weddell seals, Antarctic toothfish, killer whales, and Adélie and emperor penguins, from damaging human activity. All fishing will be forbidden in a no-take zone that will comprise c. 72% of the protected area, while some harvesting of fish and krill will be permitted in other areas for scientific research. The milestone agreement to designate the protected area is the culmination of a decade of negotiations.
Source: New Scientist (2016) newscientist.com/article/2110739-worlds-largest-marine-reserve-agreed-for-antarcticas-ross-sea/

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