

Briefly

SPOTLIGHT ON CAPACITY

New initiative to boost capacity for nature-based climate solutions...

Launched in June 2022, the Nature for Climate Adaptation Initiative aims to facilitate nature-based climate action that protects both livelihoods and biodiversity in the most vulnerable parts of the world. Offering a wide range of resources, expert guidance and accessible learning opportunities, this new project by the International Institute for Sustainable Development, with support from Global Affairs Canada, provides civil society organizations with tools to enhance the implementation of nature-based climate solutions for adaptations that protect people. The Initiative will also feature an e-learning course on ecosystem-based adaptation. The Initiative is socially inclusive, integrating principles of good governance, equity and considerations of Indigenous, local and traditional knowledge, and actively promotes and enables gender equality.

Source: *International Institute for Sustainable Development* (2022) iisd.org/articles/press-release/nature-climate-adaptation

... new partnership for improved capacity in coral reef conservation...

Scientists estimate that half of the world's coral reefs have died over the past 40 years. Effective conservation actions are needed urgently to save what is left and restore damaged reefs. Two non-profit organizations, Rollet Reefs Foundation and Bluetide, have joined forces to affect change in coral reef conservation in developing countries, particularly in the Caribbean and Indian Ocean. Providing capacity building, training and certifications, the newly formed Coral Reefs Conservation Partnership will start by developing a workforce capable of carrying out specialized jobs as part of marine conservation initiatives in Puerto Rico. In addition, the Partnership aims to educate, support, promote and engage local communities, governmental organizations and industry policy makers in its efforts to find the balance between coral reef conservation, rehabilitation efforts and the needs of the local economy. After the initial programme in Puerto Rico, the Partnership plans to roll out its successful models globally.

Source: *Rollet Reefs Foundation* (2022) rolletreefsfoundation.com/bluetide-reefs-conservation-partnership

... and a new digital space to catalyse Indigenous-led conservation in Canada

The Conservation through Reconciliation Partnership has announced the launch of a new online platform, created to inform and inspire Indigenous-led conservation initiatives in Canada, including the creation of Indigenous Protected and Conserved Areas (IPCAs). The IPCA Knowledge Basket holds resources to support Indigenous leadership, and will help to strengthen their capacity to realize their visions for the lands and waters they have been stewarding for millennia. The IPCA Knowledge Basket provides a central, interactive space for gathering and sharing resources for Indigenous-led conservation. Inspired by the practice of basket weaving, it was designed to bring together the best of Indigenous and western science, innovation and knowledge. The new platform offers a searchable database of original content, including stories from Indigenous-led conservation initiatives, an illustrated guide for creating IPCAs, audio-visual resources, and links to more than 1,000 academic and non-academic resources.

Source: *Newswire* (2022) newswire.ca/news-releases/new-digital-space-to-celebrate-and-catalyse-indigenous-led-conservation-in-canada-820653487.html

Capacity building for wildlife health professionals

The Wildlife Health Bridge builds global capacity in trained wildlife health professionals in biodiverse low- and middle-income countries. The programme was established in 2009 and is based on a partnership of the Zoological Society of London, the Royal Veterinary College, the University of Edinburgh's Royal (Dick) School of Veterinary Studies, the Wildlife Institute of India and the University of Melbourne Veterinary School. It provides quality education in wildlife health, ecosystem health and wildlife biology, facilitates the interchange of students between collaborating countries for research studies and provides a global graduate network of wildlife health professionals. In addition to established Masters' level training programmes, the Wildlife Health Bridge has developed a collaborative field-based course, Interventions in Wild Animal Health, provided annually in India since 2016, which has trained 138 veterinarians to date, enhancing local and international capacity in managing emerging wildlife health issues. The alumni network facilitates networking and exchange between members from 67 countries.

Source: *One Health & Implementation Research* (2022) doi.org/10.20517/ohir.2022.03

Closing the knowledge-action gap in conservation with open science

In conservation science and practice, research outputs are often not translated into effective actions. Amongst the reasons for this knowledge-action gap are fundamental barriers to access: knowledge is often unavailable to practitioners because it is published behind a paywall, and even if available, it can be challenging to interpret or difficult to use. These problems can be solved with open science practices, a new study shows. The authors found that firstly, open access publishing makes the scientific literature available to all, removing barriers to access. Secondly, open materials (detailed methods, data, code and software) increase the transparency and usability of research findings. And thirdly, open educational resources enable conservation scientists and practitioners to acquire the skills needed to effectively use research outputs. The adoption of such open science practices thus helps achieve conservation goals, reduces inequities and increases capacity for conservation.

Source: *Conservation Biology* (2022) doi.org/10.1111/cobi.13835

How can a new UN ocean treaty change the course of capacity building?

Approximately half of the Earth's surface area is covered by marine areas beyond national jurisdiction, yet few countries have the capacity to conduct scientific research there. Capacity building is thus crucial for the conservation and sustainable use of biodiversity in these areas. After almost 2 decades of development, the final negotiations for the agreement to protect biodiversity beyond national jurisdiction (BBNJ Agreement) are now underway. In a recent publication, a team of researchers reflects on how the BBNJ Agreement can contribute to improved capacity building, highlighting the challenges and providing recommendations to strengthen the framework for capacity building and technology transfer. These include: states self-determining their capacity needs and priorities; developing a monitoring framework to assess the effectiveness of long-term outcomes of capacity building; sharing information about opportunities to meet capacity needs; ensuring adequate financial resources for low-income countries; and ongoing international attention to capacity building and technology transfer as part of the long-term implementation of the Agreement.

Source: *Aquatic Conservation: Marine and Freshwater Ecosystems* (2022) doi.org/10.1002/aqc.3796

INTERNATIONAL

How can we prioritize conservation funds without knowing the costs?

Conservation is limited by funding, so we need to make sure the actions we take are efficient. This requires information on the costs of conservation actions, but in a recent study, researchers showed that such costs are rarely reported in the scientific literature. The team reviewed almost 2,000 studies testing conservation actions and found that only 8.8% of these reported the total costs of the actions. Even when total costs were reported, important information needed to interpret the costs was often missing, and there was a lack of consistency and standardization in the reporting, making it difficult to compare the cost-effectiveness of different conservation actions. To address this problem, the multi-partner initiative The Economics of Ecosystem Restoration is working to collect standardized data about the costs and benefits of ecosystem restoration.

Sources: *BioScience* (2022) doi.org/10.1093/biosci/biac007 & Mongabay (2022) news.mongabay.com/2022/04/conservation-costs-are-rarely-reported-making-it-difficult-to-prioritize-funding

Protected areas do not always benefit wildlife

National parks and other protected areas have had mixed success in conserving wildlife, according to the largest ever global study on their effects. Using data on wetland birds from 1,506 protected areas around the world, scientists analysed the trends of more than 27,000 populations, and found that increased provision for the birds had not necessarily helped. Researchers said the study has important implications for the movement to protect 30% of the Earth for wildlife by the end of the decade. The results show that managing parks to protect species and their habitats is crucial, and that without such management protected areas are less likely to be effective. Governments are currently negotiating the targets to protect biodiversity during this decade, with dozens of countries signing up to a target to protect 30% of land and sea by 2030. Although this study only looked at water birds, scientists said their abundance, ability to colonize and leave locations quickly, and the quality of the data meant they were a good proxy for other wildlife.

Sources: *Nature* (2022) doi.org/10.1038/s41586-022-04617-0 & *The Guardian* (2022) theguardian.com/environment/2022/apr/20/protected-areas-dont-always-benefit-wildlife-global-study-finds-aoe

Persistent gender gap in published conservation science

A new analysis found that peer-reviewed literature published by scientists from The Nature Conservancy, one of the largest global conservation organizations, is dominated by men from the Global North, reflecting a pattern that is present across the global conservation science community. By examining all papers over a 50-year period (1968–2019), researchers from The Nature Conservancy and the University of Queensland, Australia, found that only 36% of authors were women, 31% of all first authors were women, and 24% of last authors were women. By comparison, seven individual men from the Global North comprised 9% of all authorships. Although the total number of women publishing at The Nature Conservancy has increased over time, the proportion of women remains below gender parity, and women from the Global South comprised < 3% of authors. The paper's authors make a number of recommendations to address this imbalance and improve the representation of women and researchers from the Global South.

Sources: *Conservation Science and Practice* (2022) doi.org/10.1111/csp2.12748 & *The Nature Conservancy* (2022) nature.org/en-us/newsroom/published-science-gender-gap

Canaries in the coalmine: loss of birds signals changing planet

Birds, sometimes described as the planet's canaries in the coalmine, are disappearing in large numbers as the impact of humanity on the Earth grows, a global review has found. Because they are relatively easy to observe, birds are the best-studied large group of animals. There are c. 11,000 bird species known globally, and the populations of half of them are falling, whereas just 6% are increasing. Bird populations are affected by damage caused by human activities, from the destruction of wild habitat, the climate crisis, pesticides and other pollution, to overhunting and impacts of alien species and diseases. This makes them reliable indicators of global change, the scientists said. Billions of birds have been lost in recent decades in North America and Europe alone, and although there are more species in the tropics, a higher proportion are at risk of extinction in temperate regions, the review found. Conservation efforts have been successful in rescuing individual species in specific locations, but concerted political will and increased funding are needed to reverse the global decline.

Source: *The Guardian* (2022) theguardian.com/environment/2022/may/05/canaries-in-the-coalmine-loss-of-birds-signals-changing-planet

Warmer winters could wipe out Antarctica's only native insect

The Antarctic midge *Belgica antarctica* might be smaller than a pea, but it is the continent's largest land animal, and the only native insect. The midge has evolved to survive in extreme conditions, yet a warming climate could threaten its existence, a new study found. The Antarctic midge is flightless and lives in moist pockets of earth on the Antarctic peninsula and nearby islands. It also lives at a slower pace than other midges, taking 2 years to complete its life cycle, most of which it spends as a larva. With Antarctica warming fast as a result of climate change, a team of scientists examined how small changes in winter temperatures might affect the midges. They collected larvae from several islands off mainland Antarctica and placed them in incubators set at three mean temperatures: -5 °C (representing a cold Antarctic winter), -3 °C (a typical winter), and -1 °C (a warm winter). After 6 months, the researchers found the larvae in the warmest incubator had lower survival, slower movement and smaller energy stores than those kept in the colder conditions.

Sources: *Functional Ecology* (2022) doi.org/10.1111/1365-2435.14089 & *Science* (2022) science.org/content/article/warmer-winters-could-wipe-out-antarctica-s-only-native-insect

A call to transform land management

A major new report warns of food supply disruptions, forced migration and rapid biodiversity loss as a result of anthropogenic damage to water and soils. In the second edition of its *Global Land Outlook* report on land degradation, the UN Convention to Combat Desertification points to global food systems as the primary cause of the problem, being responsible for 80% of deforestation, 70% of freshwater use, and the single greatest cause of terrestrial biodiversity loss. The report projects the consequences of three land-use scenarios. If current trends continue to 2050, additional land the size of South America will be degraded, hitting crop yields, particularly in Africa. However, if c. 35% of the 5 billion ha of global agricultural land area is restored using agroforestry, grazing management and assisted natural regeneration, crop yields could increase by 5–10% in most developing countries. In the third scenario, if we implement systems that both restore and protect land for biodiversity, water regulation and soil conservation, c. one-third of biodiversity loss would be prevented.

Source: *Eco-Business News* (2022) eco-business.com/news/un-report-land-degradation-now-affects-half-the-worlds-population-and-economy

EUROPE

Researchers mobilize to protect a wild river in the Balkans

In 2017, researchers from across Europe converged on a cold, fast-moving river in the highlands of Albania for a week of intensive fieldwork. Their mission: to kick off a multi-year effort to assemble a detailed ecological portrait of the Vyosa River, one of Eastern Europe's last free-flowing waterways. They hoped to draw public attention to the river's rich wildlife and persuade policymakers to protect it from a cascade of proposed dams. In June 2022, that effort paid off when Albania's prime minister pledged to create a Wild River National Park that would protect c. 500 km of the Vyosa and its tributaries from hydro-power development. Scientists are now hoping to replicate this success along another imperiled waterway in the region: the upper Neretva River, which is threatened by c. 70 proposed dams. In July 2022, researchers carried out ecological surveys along the river's headwaters in Bosnia and Herzegovina as part of Neretva Science Week, aiming to catalog the species that depend on the river. They hope the data will help catalyse support for a new national park to preserve the Neretva's headwaters.

Source: *Science* (2022) [science.org/content/article/balkans-researchers-mobilize-protect-wild-river](https://www.science.org/content/article/balkans-researchers-mobilize-protect-wild-river)

Flying insect numbers have plunged by 60% since 2004 in Great Britain

The number of flying insects in Great Britain has plunged by almost 60% since 2004, according to a survey that counted splats on car registration plates. The scientists behind the survey said the drop was terrifying, as life on Earth depends on insects. The results from many thousands of journeys by members of the public in the summer of 2021 were compared with results from 2004. The decline was highest in England, at 65%, with Wales recording 55% fewer insects and Scotland 28%. With only two large surveys so far, the researchers said it was possible that those years were unusual for insects, potentially skewing the data, and that it is vital to repeat the analysis every year to build up a long-term dataset. However, the new results are consistent with other assessments of insect decline, including a car windscreen survey in rural Denmark that ran every year from 1997 to 2017 and found an 80% decline in insect abundance.

Source: *The Guardian* (2022) [theguardian.com/environment/2022/may/05/flying-insect-numbers-have-plunged-by-60-since-2004-gb-survey-finds](https://www.theguardian.com/environment/2022/may/05/flying-insect-numbers-have-plunged-by-60-since-2004-gb-survey-finds)

Decline of migratory birds highlighted at Adriatic Flyway conference

Europe is no exception to global trends of rising biodiversity loss and increasing environmental pressures, even if recent policy developments have been slow to shift the focus onto the processes taking place in Europe itself. A key challenge to identifying and tackling the drivers of biodiversity loss in Europe has been the lack of reliable data, and often the lack of political will to address it. The 4th Adriatic Flyway Conference, which took place in Zadar, Croatia, in April, provided a much-needed platform for regional conservationists to share novel data on the decline of migratory birds along one of the key flyways between Africa and Europe. Although the details and numbers vary from country to country, the threats to migratory bird populations are similar: illegal killing, poisoning and trade of birds are still widespread across south-eastern Europe. Although many knowledge gaps remain, there is significant progress along the Adriatic Flyway to address these threats. In recent years, local partners of BirdLife International and other environmental NGOs have collected data to detect and tackle illegal bird trade in the region. Moving forward, the key challenge will be to translate this knowledge into political action.

Source: *Beastly Business* (2022) [beastlybusiness.org/2022/05/14/bird-crime-along-the-adriatic-flyway](https://www.beastlybusiness.org/2022/05/14/bird-crime-along-the-adriatic-flyway)

EU plan to halve use of pesticides in milestone legislation

For the first time in 30 years, legislation has been put forward to address catastrophic wildlife loss in the EU. Legally binding targets for all member states to restore wildlife in terrestrial, freshwater and marine habitats were announced in June, alongside a crack-down on chemical pesticides. In a boost for UN negotiations on halting and reversing biodiversity loss, targets released by the European Commission include reversing the decline of pollinator populations and restoring 20% of land and sea by 2030, with all ecosystems to be under restoration by 2050. The commission also proposed a target to cut the use of chemical pesticides in half by 2030 and eradicate their use near schools, hospitals and playgrounds. The proposals, which campaigners have hailed as a potential milestone for nature, could become law in approximately one year. The restoration proposal is the first biodiversity legislation since the release of the Habitats Directive in 1992 and is a crucial part of the EU's biodiversity strategy.

Source: *Bird Guides* (2022) [birdguides.com/news/eu-plan-to-halve-use-of-pesticides-in-milestone-legislation](https://www.birdguides.com/news/eu-plan-to-halve-use-of-pesticides-in-milestone-legislation)

Swedish government aims to cull wolf population by as much as half

Sweden's government has said it aims to carry out a significant wolf cull this year, potentially reducing the current population of c. 400 individuals by as much as half, in a move that could breach EU directives. The reason, according to a statement from the rural affairs minister, is an increased level of human-wolf conflicts, and decreasing levels of public acceptance of the predators. The state environmental protection agency had previously estimated that wolf numbers in Sweden should not fall below c. 300, strengthened regularly by new arrivals from outside the country, if the population was to remain viable and not be weakened by inbreeding. However, a majority in the Swedish parliament was in favour of cutting the wolf population to 170 individuals, at the lower limit of the 170–270 range that would allow the country to meet the conservation requirements of the EU's species and habitats directive. Conservation groups have said a population of 300 is the bare minimum and argue that the country could easily support a population of 1,000. They accuse the government of bowing to the powerful hunting lobby, which argues that wolves prey on moose and are a danger to hunters' dogs.

Source: *The Guardian* (2022) [theguardian.com/world/2022/may/24/sweden-aims-to-cull-wolf-population-by-as-much-as-half](https://www.theguardian.com/world/2022/may/24/sweden-aims-to-cull-wolf-population-by-as-much-as-half)

Appetite for frogs' legs in Europe driving species to extinction

Frogs' legs are most frequently associated with French cuisine, but records show that the culinary delicacy was commonly consumed in southern China from at least the first century CE. Frogs' legs are still a popular dish in many countries, and, according to a new report by German animal conservation organization Pro Wildlife and French NGO Robin des Bois, the gastronomic popularity of frogs' legs in the EU has led to the depletion of frog species in Turkey, Albania and Indonesia (see also *Oryx*, 55, 364–372). The Habitats Directive prohibits the catching of native wild frogs in the 27 EU member countries, but none of the countries impose restrictions on imports. Pro Wildlife said 70% of imported frog meat goes to Belgium, which then sends most of its imports to France. France imports 16.7% themselves and the Netherlands 6.4%. In addition to harming the frogs themselves, over-exploitation of the amphibians and the resultant declines in their numbers have a direct effect on the ecosystems in which they live.

Source: *EcoWatch* (2022) [ecowatch.com/frogs-legs-endangered-species.html](https://www.ecowatch.com/frogs-legs-endangered-species.html)

AFRICA

Sea cucumber smuggling threatens livelihoods and ecosystems

The high demand for sea cucumbers in China is leading to their over-exploitation along the East African coast. This has potentially devastating consequences for local people and for the sensitive marine biodiversity. The Western Indian Ocean is home to the world's fifth-largest population of sea cucumbers. In East African coastal areas such as Kwale, Pemba and Zanzibar, local fishers have relied on sea cucumbers as a source of food and household revenue for generations. East African sea cucumbers are increasingly smuggled to Hong Kong, where they are used to produce medicinal products. Inconsistent legislation across East Africa has allowed the over-exploitation of sea cucumbers, which are CITES listed since 2019. Research determining areas where sea cucumbers reproduce has contributed to the regeneration of populations. Such research now needs to be expanded and combined with effective law enforcement and environmental protection efforts.

Source: *Premium Times* (2022) premiumtimesng.com/news/headlines/539784-analysis-sea-cucumber-smuggling-in-east-africa-threatens-livelihoods-ecosystems.html

Kenyan government to pay reparations to evicted Ogiek people

The African Court of Human and Peoples' Rights has ruled that the Kenyan government must pay reparations for repeatedly evicting Indigenous Ogiek people from ancestral lands in the Mau Forest in western Kenya, ending a 13-year court battle. The state must also grant collective land titles to the Ogiek. Mau Forest is the largest remaining Indigenous forest in the country and an important water catchment. The Kenyan government states that evictions are necessary to protect the land from further deforestation. In 2017, the African Court of Human and Peoples' Rights found that the Kenyan government had violated seven articles of the African Charter on Humans and Peoples' Rights by repeatedly evicting the Ogiek from their ancestral lands, but did not rule on the issue of reparation at the time. Now the court unanimously dismissed the arguments put forward by the Kenyan government to its 2017 judgement and ordered that the state pay reparations for material and moral damages to the Ogiek community.

Source: *Mongabay* (2022) news.mongabay.com/2022/06/african-court-rules-in-favor-of-indigenous-land-titles-reparations-from-the-kenyan-govt

Biologist fighting plastic pollution wins Whitley Award

Estrela Matilde has received a Whitley Award worth GBP 40,000 from the Whitley Fund for Nature, a UK wildlife conservation charity. She is working with local people on the island of Príncipe in the Gulf of Guinea to reduce plastic pollution that threatens five of the planet's seven sea turtle species. With her award, Estrela Matilde will fit plastic bottles with innovative GPS transmitters to capture data on their distribution and catalyse a government commitment to reducing plastic imports. She is also starting waste-based businesses with female entrepreneurs, recycling washed-up flipflops and beer bottles into jewellery. Príncipe, the smaller of the two islands in São Tomé and Príncipe, is a UNESCO World Biosphere Reserve and has the highest density of endemic species on the planet. Sea turtles belong to the most ancient line of living reptiles, and five of the seven species are found around Príncipe: the Vulnerable olive ridley, leatherback and loggerhead turtles, the Endangered green and the Critically Endangered hawksbill turtle.

Source: *Whitley Fund for Nature* (2022) whitleyaward.org/2022/04/28/estrela-matilde-wins-whitley-award

Tracking white-bellied pangolins in Nigeria

In recent years, Nigeria has become a major transit point for the illegal trade in pangolins, the scaly anteaters known for being the most trafficked mammals in the world. As the four Asian pangolin species are becoming increasingly scarce, traffickers have made Nigeria their hub for collecting scales and meat from the four African species and shipping them to East Asia. The white-bellied pangolin *Phataginus tricuspis*, also known as the tree pangolin, is particularly suited to an arboreal existence, and it is unknown how many survive in the wild. Nigerian scientist Charles Emogor is at the forefront of efforts to save the species. To track the animals, he and his team are attaching VHF tags to their tails. The harmless devices transmit periodic location information, helping scientists determine the species' range and their habitat use in the forest. This information can help identify key areas for conservation efforts to help protect pangolins. In addition, changing communities' attitudes toward pangolins, and incentivizing their protection, is crucial to overcome the rampant over-exploitation that threatens their survival.

Source: *Mongabay* (2022) news.mongabay.com/2021/10/tracking-white-bellied-pangolins-in-nigeria-the-new-global-trafficking-hub

Tanzania to use its ivory stockpile for awareness campaigns

In a move meant to formulate a continent-wide position on the trade in live elephants and ivory stockpiles, Tanzania said it is committed to conserving wildlife, including elephants, and has decided to use stockpiled ivory for awareness purposes, meaning the country's stockpile would neither be sold nor destroyed. The stance follows a ministerial conference, dubbed the Elephant Summit, held in Harare, Zimbabwe, earlier this year. The summit's aim was to build consensus among African countries for the coming 19th meeting of the Conference of the Parties (CoP19) to be held in Panama in November. Although other invited countries such as Kenya did not attend, having repeatedly demanded a total ban on trade in elephant products, Tanzania was represented by Mary Masanja, the Deputy Minister for Natural Resources and Tourism. She said Tanzania, together with other countries in Southern Africa that were present in the meeting, called for the creation of a special fund to compensate people affected by the direct impact of human-wildlife conflict.

Source: *The Citizen* (2022) thecitizen.co.tz/tanzania/news/national/tanzania-to-use-its-sh186-billion-ivory-stockpile-for-awareness-3831996

Celebrating the validation of Ethiopia's National Ecosystem Assessment Report

Earlier this year, Ethiopia announced the validation of its National Ecosystem Assessment Report, the country's first comprehensive assessment that synthesizes knowledge on the status and trends of biodiversity and ecosystem services and their contributions to people. The validation took place at a workshop held in Adama town, a city in Ethiopia's rift valley. During the workshop, the authors presented the main findings of the assessment and key recommendations to the 111 workshop attendees, including delegates from government ministries, representatives from local and regional offices, members of local communities, professional associations, NGOs and media institutions. The Assessment represents an important milestone in the country's efforts to strengthen the conservation, restoration and sustainable use of biodiversity and ecosystem services. It highlights the crucial provisioning, regulating, and cultural services provided by the country's ecosystems, including food, construction materials, flood and erosion control, pollination, and areas of aesthetic and spiritual importance.

Source: *UNEP-WCMC* (2022) unep-wcmc.org/en/news/celebrating-the-validation-of-ethiopia-national-ecosystem-assessment-report

AMERICAS

Onondaga Nation regains land from New York State

The Onondaga Nation will recover more than 1,000 acres of forest lands in the Tully Valley through a historic agreement with New York State and the federal government of the USA. The land, which includes the headwaters of Onondaga Creek, will be returned to the care of the Onondaga Nation as part of the Onondaga Lake Natural Resource Damages and Restoration process. This is a groundbreaking opportunity to restore the land, preserve Onondaga culture and address historic and ongoing land injustices. The decision will benefit not only the local ecosystem and the Onondaga Nation citizens as they reconnect with their ancestral lands, but also state and federal agencies and the general public, as they learn from cross-cultural consultation, collaboration and educational opportunities. The return of the land to the stewardship of the Onondaga people begins to redress the unjust dispossession of the Onondaga Nation from their ancestral lands and the many years of industrial abuse of Onondaga Lake, which previously provided a culturally important and resource-rich site for fishing, hunting and gathering but is now too contaminated to offer these services.

Source: *Onondaga Nation* (2022)

onondagation.org/uncategorized/2022/land_back_1023_acres

Rejection of Arctic mine expansion bid offers hope for narwhal population

The expansion of an iron ore mine in the Arctic that would have increased shipping and led to the complete extirpation of the narwhal from the region has been blocked. After 4 years of consultations and deliberations, the Nunavut Impact Review Board rejected a request from Baffinland Iron Mines Corp asking to significantly increase mining on the northern tip of Baffin Island in Nunavut, Canada. The area is home to a rich iron ore deposit and the densest narwhal population in the world. The news came as a relief to conservationists and community members working to protect the narwhal population, and the Inuit who rely on them for subsistence. The review board issued a statement saying that the Mary River mine expansion project carried potential for significant and lasting negative effects on marine mammals, the marine environment, fish, caribou and other terrestrial wildlife, vegetation and freshwater.

Source: *The Guardian* (2022) theguardian.com/world/2022/may/16/arctic-mine-expansion-rejection-narwhal-canada

Giant tortoise species thought extinct for 100 years found alive

A single female giant tortoise was discovered in 2019 on Fernandina Island, an active volcano in the Galápagos Islands that is considered by some to be the largest pristine island on Earth. Scientists have confirmed the tortoise, nicknamed Fernanda, belongs to a species thought extinct for over a century. The first specimen of *Chelonoidis phantasticus*, also known as the fantastic giant tortoise, was discovered on Fernandina Island in 1906. The specimen differed from other Galápagos tortoises in the shape of its shell. Fernanda, who is at least 50 years old, was discovered on an isolated patch of vegetation that was cut off from the island's main vegetated area by lava flows. She was placed in captivity at the Galápagos National Park Tortoise Center. Researchers sequenced the genomes of both Fernanda and the 1906 specimen and found the two tortoises were genetically distinct from other species of Galápagos tortoises and are from the same lineage. Researchers have found tracks and faeces suggesting 2–3 other tortoises may be on the island.

Sources: *Communications Biology* (2022) doi.org/10.1038/s42003-022-03483-w & *Business Insider* (2022) businessinsider.com/galapagos-giant-tortoise-thought-extinct-100-years-has-been-found-2022-6

Blue Spix's macaw will be reintroduced to its Brazilian forest home

In 1995 conservationists and scientists embarked on a desperate attempt to save the world's rarest bird, a blue-gray parrot called the Spix's macaw, which used to live in the tropical dry forest in north-eastern Brazil. Already rare when first described in the early 19th century, the bird had taken on an aura of mystery, making it irresistible to parrot collectors and poachers. By the mid 1990s only a single, male individual remained alive in the wild. Conservationists released a single female close to where the male lived. The female seemed to quickly adapt to her new life, but mysteriously disappeared after a few months. The wild male vanished a few years later, and the species' fate seemed sealed. However, in June 2022, over 20 years since the species became extinct in the wild, eight Spix's macaws were released from captivity. Twelve more are supposed to follow at the end of the year, and more in the future. If everything goes according to plan, these birds will form a new population of Spix's macaws in their natural habitat.

Source: *Science* (2022) science.org/content/article/two-decades-vanished-stunning-spixs-macaw-returns-forest-home

Secrets of California's skydiving salamanders revealed

Wandering salamanders *Aneides vagrans* reside in the crowns of the world's tallest trees, the redwoods in California's temperate forests, and have been observed to readily jump from the canopy when disturbed. A new study sheds light onto this daring and surprising survival technique. The study shows how the salamanders are able to parachute consistently, slowing their speed and controlling their movements. To test the animals' skydiving abilities, the research team put them into small wind tunnels. The salamanders moved their bodies to slow their descent, reducing their velocity by 10%. They also pumped their tails and moved their limbs to change direction. Theories to explain how this ability may have evolved include the use of jumping and dropping to quickly escape predation, or as a form of locomotion through the forest canopy. Further research is ongoing to study the gliding and parachuting salamanders outside the lab, in their natural environment.

Sources: *Current Biology* (2022) doi.org/10.1016/j.cub.2022.04.033 & *The Guardian* (2022) theguardian.com/environment/2022/may/25/skydiving-salamanders-california-wandering-research

A helping hand for red-footed tortoises making a comeback in Argentina

Red-footed tortoises *Chelonoidis carbonarius* are so rarely seen in the Gran Chaco region of Argentina that they are considered locally extinct, but the species is now making a comeback. In May, conservationists working with Rewilding Argentina and partner organizations released 10 red-footed tortoises into El Impenetrable National Park in Chaco province, a 130,000-ha park in northern Argentina, close to the Paraguay border. In the coming months, the team plans to release another 30 tortoises. Since its establishment in 2014, El Impenetrable National Park has been the site of several rewilding projects, including the reintroduction of jaguars and marsh deer. Red-footed tortoises have been under pressure from an illegal pet trade that is booming in Paraguay and Bolivia. Additional threats include habitat destruction and targeted hunting for meat consumption. The 40 red-footed tortoises in this reintroduction project were all rescued from the illegal pet trade in Paraguay, and then quarantined in Argentina before their release into the Park. The released tortoises will be tracked by VHF transmitters attached to their shells.

Source: *Mongabay* (2022) news.mongabay.com/2022/05/a-helping-hand-for-red-footed-tortoises-making-a-comeback-in-argentina

ASIA & OCEANIA

Updated priority list for the conservation of Asian songbirds

The IUCN Species Survival Commission Asian Songbird Trade Specialist Group (ASTSG) has published a revised Priority Taxa List. From 28 species identified in the previous 2015 Priority Species List, this list now includes 68 taxa, highlighting the continuous threat that trade poses to songbirds in the region. The ASTSG used taxa instead of species to recognize unique conservation units, even if they are not affected at the species level or not officially recognized as separate species. Taxa included in this list are all threatened by trade, populations are known or believed to be declining and there are no established introduced populations outside their natural range. Tier 1 includes top-priority taxa requiring urgent conservation intervention, and Tier 2 is a watch list for taxa that are thought to be affected by trade, but more research is needed to ascertain the extent of the threat. The list will be updated regularly as new information becomes available.

Source: IUCN SSC ASTSG (2022) asiansongbirdtradesg.com/taxa-list

Singapore to host international rainforest competition in 2023

Although small and fragmented, Singapore's forests could hold the key to unlocking new solutions to advance the protection and conservation of the world's rainforests and biodiversity. Singapore has been chosen to host the semi-finals of the international competition XPRIZE Rainforest, which aims to identify technologies that can be used to monitor rainforests and their biodiversity in real time. The semi-finals testing will take place in 2023. This was announced by XPRIZE, a non-profit organization that runs large-scale competitions to crowdsource solutions to tackle global challenges, during the World Biodiversity Forum in Davos, Switzerland, in June. The organizer said Singapore was chosen because of its conservation actions and its efforts to harness science and technology to address biodiversity in an urban landscape. This includes developing new technologies such as video and camera trapping to map animal populations as well as satellite tracking of migratory shorebirds. The National Parks Board is also using acoustic sensors and minute traces of DNA in the environment to survey Singapore's flora and fauna.

Source: Channel News Asia (2022) channelnewsasia.com/sustainability/singapore-host-international-rainforest-competition-2023-2776336

Key habitat in Nepal could lose 39% of its tigers in 20 years

Roads that run close to an important national park in Nepal's southern plains could result in an increased rate of roadkill that would cut the park's population of adult tigers by nearly two-fifths over 2 decades, a new study shows. The study forecasts that 46 Bengal tigers *Panthera tigris tigris* could be killed on the roads near Chitwan National Park, bringing the adult population down from 133 at present to 81 in 20 years. Another 30 tigers could be killed in the same period if a proposed railway line in the area is built, according to the study, which modeled its projections using tiger movement data collected in Chitwan since the 1970s. As the tiger population in Chitwan is relatively small compared to those in other habitats across the Indian subcontinent, this reduction of 39% could make them vulnerable to diseases or inbreeding, which would increase their risk of local extinction.

Sources: *Biodiversity and Conservation* (2022) doi.org/10.7717/peerj.13472 & *Mongabay* (20202) news.mongabay.com/2022/05/study-warns-of-increased-tiger-roadkill-risk-on-roads-near-nepal-park

Hope for reef manta rays in Indonesia's Komodo National Park . . .

Tangled up too often in fishing nets, manta rays *Mobula alfredi* have been plunging towards extinction as fishing pressure and other stressors take a toll on their populations. But the species has found a safe haven in Komodo National Park, an area of water around Indonesia's Lesser Sunda Islands. A new study identified an aggregation of 1,085 reef manta rays in the waters of Komodo National Park, a UNESCO World Heritage Site that spans more than 1,800 km² of islands and ocean. Indonesia used to have one of the most productive manta ray fisheries, but in 2014, the country pledged to protect both reef manta rays and giant manta rays *Mobula birostris* by making it illegal to catch them or trade any of their body parts. Despite this move, experts say illegal fishing still takes place in and around Indonesia, and that fishers continue to catch manta rays as bycatch. The study, which relied on photo identification data collected by researchers and citizen scientists, found that 56 of the surveyed manta rays had injuries inflicted by fishing gear.

Sources: *Aquatic Biology* (2022) doi.org/10.7717/peerj.13302 & *Mongabay* (2022) news.mongabay.com/2022/05/for-reef-mantas-indonesias-komodo-national-park-is-a-ray-of-hope

. . . for eastern quolls released in New South Wales sanctuary . . .

For millions of years eastern quolls were plentiful on the Australian mainland, but in the early 1900s disease and feral animals wiped them out. There are hopes 50 eastern quolls returned to the wilderness in New South Wales will provide a boost for the Endangered species. It is the largest single release on mainland Australia by conservation organization Aussie Ark. The creatures are now roaming in the 400-ha protected Barrington Wildlife Sanctuary in Barrington Tops, and it is hoped they will breed with an existing population already released into the area. Introduced feral foxes and cats have been removed from the fenced sanctuary to create a pristine habitat for quolls to survive, thrive and breed.

Source: *The Guardian* (2022) theguardian.com/environment/2022/may/24/high-hopes-for-baby-boom-after-release-of-50-eastern-quolls-in-nsw-sanctuary

. . . and for rare pygmy hogs released into the wild in Manas

The Pygmy Hog Conservation Programme released 10 captive-bred pygmy hogs into their grassland habitat in Manas National Park in Assam, India, in June 2022. This is the third time pygmy hogs have been reintroduced in Manas: 14 were released 2020 and 12 in 2021. With this release, the total number of pygmy hogs reintroduced into the wild by the Programme has reached 152 (70 males, 82 females), which is more than their remaining global wild population before the reintroductions started. Reintroduction of captive hogs into the wild began in 2008. In the last 2 years, when both coronavirus and African swine fever in Assam have presented major challenges for the Pygmy Hog Conservation Programme, the successful release of these 14 hogs in 2020 and 12 in 2021 is a landmark achievement. These releases have been celebrated as a key step on the road to the establishment of a new subpopulation of pygmy hogs in Manas National Park.

Source: *Durrell* (2022) durrell.org/news/return-of-pygmy-hogs-to-their-home-in-manas

All internet addresses were up to date at the time of writing. The Briefly section in this issue was written and compiled by Emma Muench, Julia Hochbach and Martin Fisher, with additional contributions from Serene C.L. Chng and Thomas White. Contributions from authoritative published sources (including websites) are always welcome. Please send contributions by e-mail to oryx@fauna-flora.org.