Briefly

SPOTLIGHT ON GENDER AND CONSERVATION

Efforts to diversify shark science...

Elasmobranch science has long been a male-dominated field, and women belonging to marginalized groups, including people of colour, LGBTQ+ individuals, and people of differing abilities, face heightened obstacles in this field. To break down some of the barriers, a team of four young women came together in 2020 to create Minorities in Shark Sciences (MISS). They advocate diversity and inclusion, encourage women of colour to contribute knowledge, and endeavour to create an equitable path to shark science. The MISS team are offering courses to educate the public about sharks, skates and rays, including the threats they face and conservation efforts to protect them. Courses are available in multiple languages, and include video lessons, activities, quizzes and action items.
Source: Public Broadcasting Service (2021) pbs.org/wgbh/nova/article/shark-week-marine-science-diversity

... and elevate women's voices in climate science

For too long, the foremost scientific body on global warming has overlooked the contributions of women scientists and the unique impact of climate change on the planet's c. 3.8 billion women, but now the Intergovernmental Panel on Climate Change (IPCC) is looking to change this. The Panel has vowed to diversify its sources of information, which could help understand how global warming is affecting women, particularly those in frontline communities. In February 2020, the IPCC adopted a policy for gender equality and inclusion and a plan for how to achieve its objectives. This includes striving for gender-balanced panels and organizing regular gender diversity training for meeting chairs and facilitators. The IPCC depends on scientists to volunteer their time to author its reports. Although the number of women authors has increased from 3% to just over 30% since the late 1980s, this is still not representative. One barrier is that women globally remain underrepresented in the science, technology, engineering and mathematics fields, which limits the pool from which IPCC can draw authors.
Source: E&E News (2021) eenews.net/articles/ipcc-aims-to-elevate-womens-voices-in-climate-science

Policies need to reflect links between gender and biodiversity crisis

The conservation community needs to raise its efforts to tackle gender inequality, argue members of the IUCN Commission on Environmental, Economic and Social Policy Specialist Group on Gender. In 2020, the researchers analysed the motions to be tabled at the IUCN World Conservation Congress, to examine to what extent the motion process would enable IUCN members to debate and vote on a range of biodiversity policy developments that had meaningfully considered the connections between conservation and gender equality. They hoped to uncover a critical mass of motions with a genuine gender element, and to connect these motions' co-sponsors so they could advocate for each other's motions at an event during Congress in Marseille. But this idea ended long before the Congress was postponed to September 2021, because only few such motions existed. This matters because conservation actors and interventions need to be current, relevant, and able to build allies with other sectors. When gender equality and equity, and the health and rights of girls and women, are considered properly, conservation is both more equitable and more effective.
Source: IUCN (2021) iucn.org/crossroads-blog/202105/gender-linked-biodiversity-and-climate-crises-when-will-our-policies-reflect

Guatemala advances gender inclusion in Selva Maya protected areas

Through the Selva Maya Natural Resources Protection Project, a toolbox has been developed to ensure local people have a voice and can participate in the planning and management of protected areas. The process resulted in a document that considers the rights of Indigenous peoples, local communities and women to access, manage and enjoy benefits deriving from the natural areas they live in and conserve. This guiding document is designed to make management plans an instrument in which the interests and needs of women, youth and men are equitably reflected, with mutual commitments to responsible and sustainable management. The guide has gender-sensitive and/or gender-transformative actions, and if properly implemented, it will support large-impact actions.
Source: IUCN (2021) iucn.org/news/mexico-central-america-and-caribbean/202106/guatemala-advances-gender-inclusion-selva-maya-protected-areas

Toward gender-responsive ecosystem-based adaptation

Climate change and the biodiversity crisis require actions that build the long-term resilience of societies, ecosystems and economies. Ecosystem-based adaptation (EbA) uses natural systems to build the resilience of ecosystems and the communities that depend on them, providing an opportunity to apply a gender-responsive approach. A new report, *Toward Gender-Responsive Ecosystem-Based Adaptation: Why It's Needed and How to Get There*, points to the importance of using a gender-responsive approach. It describes key building blocks for effective and gender-just EbA, includes practical examples, and can help EbA practitioners and policy-makers in governments, research institutions, businesses and civil society.
Source: International Institute for Sustainable Development (2021) iisd.org/publications/toward-gender-responsive-EbA

Traditional leaders in Zambia shift gender norms

Across much of Africa, land is allocated and inherited through customary practices rooted in kinship. In Zambia, many ethnic groups follow a matrilineal system, where women own land and pass it down the maternal line. But ownership does not always translate into access, use and control of land, because gender norms undermine women's decision-making power. Traditionally, men have authority over household resources, including land. In Zambia's customary systems chiefs and their advisors, known as *indunas*, and village headpersons allocate land. These leaders are usually men, and they influence whether norms and practices persist. Recognizing this, the USAID-funded Integrated Land and Resource Governance Programme piloted an approach to engage traditional leaders in shifting harmful gender norms. Ninety-six *indunas* and village headpersons from seven chiefdoms participated in a year-long dialogue series, resulting in steps to shift norms that hinder women's land rights. In five chiefdoms, *indunas* facilitated discussions about harmful traditions, such as sending divorcees and widows away from villages. These forums led many women to bring their cases to the chief's attention. In four chiefdoms, *indunas* drafted by-laws supporting women's land rights and banning property grabbing.
Source: International Institute for Environment and Development (2021) iied.org/traditional-leaders-zambia-shift-gender-norms-strengthen-womens-land-rights

https://doi.org/10.1017/S0030605321001356 Published online by Cambridge University Press

INTERNATIONAL

Climate change: vulnerable nations call for emergency pact

The countries most vulnerable to climate change are calling for an emergency pact. The group wants all countries to agree radical steps to avoid climate catastrophe at the UN Climate Change Conference in November in Glasgow, UK. Representing c. 1.2 billion people, the Climate Vulnerable Forum (CVF) comprises countries in Africa, Asia, the Caribbean, Latin America and the Pacific. The group has been key in pushing the rest of the world to keeping the rise in global temperatures to under 1.5 °C this century. Ahead of the Glasgow meeting, the CVF has issued a manifesto for what the conference must deliver to keep the planet safe and protect the most vulnerable. Disadvantaged nations say that richer countries must fulfil their obligations to deliver USD 100 billion in climate finance per year during 2020–2024. The CVF nations want this money to be split equally between cutting carbon emissions and helping countries adapt to the threats posed by rising temperatures.

Source: BBC (2021) bbc.co.uk/news/science-environment-58477926

Climate change will impact Antarctic seal species differently

An international study reveals how climate change may affect seals in one of the most remote ocean regions in the world, the Weddell Sea. The team engaged thousands of citizen scientists over a few years to search for Southern Ocean seals—crabeater and Weddell seals—using satellite images. They found that Weddell and crabeater seals breed close to where they can find food. The researchers also discovered that climate change will affect these breeding locations differently. As temperatures rise, crabeater seals will struggle to find places to rest and raise their young, in addition to having less food available to them. This is because they breed on the unstable and short-lived pack-ice that is drifting on the sea, and feed almost exclusively on Antarctic krill, and both pack-ice and krill are becoming less abundant. In contrast, Weddell seals are expected to be minimally affected in the near future. They breed on ice that is fastened to the Antarctic continent and thus more stable, and are more flexible in their diet, eating fish, krill and squid.

Sources: Global Change Biology (2021) doi.org/10.1111/gcb.15828 & *Phys.org* (2021) phys.org/news/2021-09-size-climate-impact-antarctic-species.html

Tuna bounce back after decade of conservation efforts

Most species of tuna were deemed at risk of extinction in 2011. Now, after efforts from conservationists and industry, including strict fishing quotas and a crack-down on illegal fishing, some populations appear to be recovering. This shows that despite increasing pressure on our oceans, species can recover if countries commit to sustainable practices. The latest update of the IUCN Red List, released at the IUCN World Conservation Congress in September 2021, revealed encouraging signs for four of seven tuna species: the Atlantic bluefin tuna *Thunnus thynnus* moved from Endangered to Least Concern, the southern bluefin tuna *Thunnus maccoyii* from Critically Endangered to Endangered, and the albacore *Thunnus alalunga* and yellowfin tunas *Thunnus albacares* from Near Threatened to Least Concern. However, tuna stocks in some areas remain of concern, such as the bluefin tuna in western parts of the Atlantic and yellowfin in the Indian Ocean.

Source: BBC (2021) bbc.co.uk/news/science-environment-58441142

Indigenous and local communities key to successful nature conservation

Indigenous peoples and local communities provide the best long-term outcomes for conservation, according to new research from the University of East Anglia in the UK and partners in France. An international team conducted a systematic review that found conservation success is the exception rather than the rule. The study suggests the answer could be equitable conservation, which empowers and supports the environmental stewardship of Indigenous peoples and local communities. The researchers studied the outcomes of 169 conservation projects around the world, primarily across Africa, Asia and Latin America. They investigated how governance—the arrangements and decision-making behind conservation efforts—affects both nature and the well-being of Indigenous peoples and local communities. International conservation organizations and governments often lead the charge on conservation projects, excluding or controlling local practices, most prominently through strict protected areas. The study recommends Indigenous peoples and local communities need to be at the helm of conservation efforts, with appropriate support from outside, including policies and laws that recognize their knowledge systems.

Sources: Ecology & Society (2021) doi.org/10.5751/ES-12625-260319 & *Phys.org* (2021) phys.org/news/2021-09-indigenous-local-key-successful-nature.html

Up to half of world's wild tree species could be at risk of extinction

Between one-third and half of the world's wild tree species are at risk of extinction, scientists warn following the most comprehensive global investigation to date. Forest clearance for farming is the biggest threat, according to the *State of the World's Trees* report. The 5-year study found 17,510 species of trees are threatened, twice the number of threatened mammals, birds, amphibians and reptiles combined, and 29.9% of all 58,497 known tree species. But the proportion at risk is likely to be higher as a further 7.1% were deemed possibly threatened and 21.6% were insufficiently evaluated. Only 41.5% were confirmed as safe. The problem is evident across the globe. Botanic Gardens Conservation International has recommended an expansion of protected area coverage for threatened species, planting campaigns that focus on the highest-risk populations, closer global collaboration, more funding for conservation efforts, and greater efforts to back up species in botanic gardens and seed banks.

Source: The Guardian (2021) theguardian.com/environment/2021/sep/01/up-to-half-worlds-wild-tree-species-could-risk-extinction

Birds of prey face global decline

Despite a few high-profile conservation success stories, birds of prey are in decline worldwide. A new analysis of data from the IUCN and BirdLife International found that 30% of 557 raptor species worldwide are considered threatened. Eighteen species are categorized as Critically Endangered, including the Philippine eagle, the hooded vulture and the Annobon scops owl. Other species are in danger of becoming locally extinct in specific regions, meaning they may no longer play critical roles as top predators in those ecosystems. Harpy eagles were once widespread throughout southern Mexico and Central and South America, but tree cutting and burning have dramatically shrunk their range. Of the threatened birds of prey that are active mostly during the day—including most hawks, eagles and vultures—54% had decreasing populations. The same was true for 47% of threatened nocturnal raptors such as owls. Globally, the biggest threats to these birds are habitat loss, climate change and toxic substances.

Sources: Proceedings of the National Academy of Sciences of the United States of America (2021) doi.org/10.1073/pnas.2018203118 & *ABC News* (2021) abcnews.go.com/Technology/wireStory/birds-prey-face-global-decline-habitat-loss-poisons-79728573

EUROPE

A record year for peregrine falcon and white-tailed eagle offspring in the Czech Republic...

The peregrine falcon *Falco peregrine* and white-tailed eagle *Haliaeetus albicilla* are making their successful comeback to the Czech Republic where they were extirpated in the 19th century. In the first half of 2021, both falcons and eagles have raised a record number of new offspring. Eleven new eagle nests, with one offspring per nest, were counted in May 2021 in the Třeboň region. In addition, researchers counted 41 falcon chicks in July 2021, from a total of 21 nesting pairs in the Jeseníky Mountains. This success is primarily attributed to intensive protection of both species and their habitats by state environmental protection agencies. The white-tailed eagle is the flagship species of the Třeboňsko Protected Landscape area. In the 1980s, nine eagles were released in southern Bohemia, and in 1985 the first chicks after c. 100 years hatched in the Czech Republic.

Sources: Nature Conservation Agency of the Czech Republic (2021) ochranaprirody.cz/o-aopk-cr/aopk-cr-informuje/aktuality/sokoli-rok-letos-v-jesenikach-vyvedli-rekordnich-41-mladat & trebonsko.ochranaprirody.cz/pro-navstevniky/aktuality/hnizdeni-orla-morskeho-na-trebonsku

... and osprey chicks in Kielder Forest

A record number of ospreys, which were extirpated in England in the 20th century, were expected this year in Kielder Forest in Northumberland, UK. This was the first time in at least 200 years that chicks have been born to osprey fathers who themselves fledged in the area. The milestone came 12 years after ospreys were first bred at Kielder, with the aim of re-establishing them in northern England. Experts visited their remote nesting site to ring one of these chicks, named Elsin after a nearby fell. Forestry England climbers gently lowered the docile youngster to the ground from its nest where it was fitted with a unique identifying ring on one leg, which it will wear all its life, and a colour tag on the other to indicate it is an English osprey. The Kielder Osprey partnership were expecting a record number of ospreys to fledge in the forest park, with at least 16 healthy youngsters on seven nests. Kielder Water and Forest Park is now considered an osprey stronghold.

Source: The Northern Echo (2021) thenorhternecho.co.uk/news/19455702.kielder-forest-osprey-chicks-set-milestone-bird-prey

Experts fear Europe's deadly floods are a glimpse into climate future

Germany, Belgium and parts of the Netherlands and Luxembourg have been grappling with devastating floods from intense rainfall in July 2021. Although scientists are still investigating the factors that may have influenced this extreme weather event, they say it shows key characteristics of climate change, with higher temperatures resulting in larger amounts of rainfall for longer periods of time. For every 1 °C of warming, the atmosphere can hold c. 7% more moisture, meaning formations such as the low-pressure system over Europe or hurricanes in the Atlantic will produce more rainfall. Storms in general are expected to become slower moving in summer and autumn because of Arctic amplification. The Arctic and Antarctica are warming at a rate 2–3 times faster than the rest of the planet, which is destabilizing the jet stream, the counter-clockwise current of air circling the northern hemisphere. The floods killed more than 220 people, and swept away buildings, roads and livelihoods.

Source: National Geographic (2021) nationalgeographic.co.uk/environment-and-conservation/2021/07/experts-fear-germanys-deadly-floods-are-a-glimpse-into-climate-future

Lack of control over supposedly local Luxembourg wood

There are not enough controls in place to check whether so-called local wood from Luxembourg is actually local, despite it being sold with that label, a forest conservation group has said. The government issues the *Holz vun hei* (local wood) label to products that are made from sustainably sourced and locally processed wood, in a bid to promote the use of local wood. But the Luxembourg arm of the Forest Stewardship Council, an international forest conservation group, is questioning how tight the controls are. In an open letter to the State Planning Minister, the Environment Minister and the Minister for Agricuture, the conservation group said the origin of a given piece of wood cannot be ascertained. Luxembourg's national wood processing industry has been decimated by growing wood exports, mainly to China, and now lacks the capacity to deal with more locally grown wood. The organization is calling for forests and processing plants to be certified by the state, so customers know where the wood comes from.

Source: Luxembourg Times (2021) luxtimes.lu/en/luxembourg/wood-lack-of-control-over-local-luxembourg-wood-conservationists-61091774de135b9236ec81f9

Romania lets towns shoot encroaching bears

Romania has given town and city authorities the power to shoot bears that break into yards and houses, angering environmental groups who called for other techniques to manage the protected animals. The government said the new order was a short-term measure to stem a rise in bear attacks and sightings of the wild animals in built-up areas. Romania has Europe's largest population of brown bears (c. 6,000) outside Russia. Previously, local authorities needed the approval of the Environment Ministry if they wanted to dispose of a bear perceived as dangerous. Under the new rules, authorities are still encouraged to try chasing off the bear or tranquilizing and relocating it, and using guns only as a last resort. But environmental protection groups Agent Green and WWF worry that shooting may now become the rule, not the exception. Bear sightings have increased as the animals' habitats are threatened by construction, logging and climate change. Many bears are also attracted by illegal rubbish dumps on the outskirts of cities and by food left by tourists.

Source: Reuters (2021) reuters.com/business/environment/romania-lets-towns-shoot-encroaching-bears-angering-green-groups-2021-07-22

First baby beaver born on Exmoor in 400 years

The first baby beaver born on Exmoor National Park, UK, for 400 years has been captured on camera. The youngster, known as a kit, was spotted at the National Trust's Holnicote Estate in Somerset, where the animals were reintroduced in 2020. The once-native mammals were hunted to extinction for their fur, glands and meat in the 16th century. A ranger from the estate said the new family of beavers were thriving. The footage shows the beavers have successfully bred, with images from a static camera revealing the 6-week-old kit swimming with its mother back to the family lodge, while she stops to nibble a branch. Beavers are seen as ecosystem engineers who restore wetland habitats through dam-building and felling trees, slowing, storing and filtering water in the landscape, which attracts other wildlife and reduces flooding downstream. The trust said the 2.7 ha enclosure the beavers were released into has since been transformed from unmanaged woodland to a more open wetland, attracting more wildlife, in just 18 months.

Source: BBC (2021) bbc.com/news/uk-england-somerset-57808517

AFRICA

Large no-take zones created around Glorieuses Archipelago

In June 2021, the Glorieuses Marine Nature Park, which was created in 2012 and covers 43,792 km² in the Indian ocean, was upgraded to the Glorieuses Archipelago National Nature Reserve by the French government. The objective of this change in the legal status of the area is to better control illegal fishing, in particular tuna fishing. The Reserve at the northern entrance to the Mozambique Channel now includes three formal no-take zones totalling 10,960 km² where all types of fishing are prohibited. Two of the four islands included in the Reserve are also fully protected. A total of 2,962 marine and terrestrial species have been recorded in the Reserve, of which 550 are categorized as threatened on the IUCN Red List.

Sources: Réserves Naturelles de France (2021) reserves-naturelles.org/archipel-des-glorieuses, reserves-naturelles.org/sites/default/files/reserves/rnn330-decret_creation_20210608.pdf & *Terres Australes et Antarctiques Françaises* (2020) consultations-publiques.developpement-durable.gouv.fr/IMG/pdf/rapport_de_presentation_projet_rnn_glorieuses.pdf

Moroccan village defends biodiversity haven on the Atlantic coast

The protection of a 44-acre biodiversity haven threatened by housing developers is at the centre of a judiciary battle between the Moroccan state and civil society organizations. The dispute concerns a coastal wetland near Dar Bouazza, a village located 30 km south of the city of Casablanca. The wetland provides habitat for 180 bird species such as the threatened marbled duck, 80 plant species, and large numbers of Morocco's dragonflies and amphibians. It is also a critical stopover for migrating birds, and provides vital ecosystem services such as the prevention of both flooding and desertification. The former fishing village is seeing increasing development as it becomes a tourist hotspot, but local communities and civil society organizations are fighting to protect the wetland. They are petitioning to have it declared as a nature reserve, to prevent the property developers from converting it into housing estates. Globally, there is a concerning loss of wetland habitats, and 85% of the planet's wetlands are threatened.

Source: Global Citizen (2021) globalcitizen.org/en/content/battle-to-save-morocco-biodiversity-haven

New national parks in Guinea...

In May 2021, the Moyen Bafing National Park was created in Guinea, West Africa, in the central-northern part of the country, close to the border with Mali. The c. 6,766 km² Park comprises a mosaic of dry forest, wooded and open savannah. There are three management zones including a 2,770 km² fully protected core zone that incorporates 26 enclaves (villages and settlements). The Park harbours 51 fish, 47 mammal and 203 bird species. With an estimated population of > 5,000 western chimpanzees (8–10% of the global population), it is the protected area with the largest population of this Critically Endangered species. The Park was created to offset the environmental impact of bauxite mining. The studies required for the creation of the Park were carried out by the Wild Chimpanzee Foundation, with funding from two mining companies, which contributed USD 45 million for the creation and management of the Park.

Sources: Wild Chimpanzee Foundation (2021) wildchimps.org/fileadmin/content_files/pdfs/press/2021_Press_release_MBNP_Guinea_WCF.pdf & *Secrétariat International Francophone pour l'Évaluation Environnementale* (2021) sifee.org/static/uploaded/Files/activites/colloques-internationaux/Cotonou/Actes/Presentation_WCF_Gervaise.pdf

... and South Africa

South African National Parks said work is underway to establish a high-altitude national park in the mountains of the Eastern Cape close to the Lesotho border and the Naude's Nek pass—South Africa's highest road at > 2,500 m. The objective was to establish an ecologically, economically and socially sustainable consolidated protected area, primarily by working with private and communal landowners. The area is rich in biodiversity and endemic species, and lies within the Eastern Cape Drakensberg Strategic Water Source Area, which is a natural source of fresh water. The Park will also improve formal protection of South Africa's grasslands, which have been identified as a national conservation priority. The proposed NE Cape Grasslands National Park will take a somewhat different form to traditional parks, in that the landowners will have the opportunity, through stewardship, to incorporate their land in the park on a voluntary basis. As such, they also stand to benefit from a range of financial incentives for private and communal land that is formally protected.

Source: Cape Town etc (2021) capetownetc.com/news/a-new-national-park-underway-in-south-africa-says-sanparks

First lethal attacks by chimpanzees on gorillas observed

A team from Osnabrück University and the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, has, for the first time, observed lethal attacks by chimpanzees on gorillas in the wild. Chimpanzees are common in East and Central Africa and share space with gorillas in some areas such as the Loango National Park in Gabon. This Park has also been home to the Loango Chimpanzee Project since 2005. Researchers are observing and analysing the behaviour of c. 45 chimpanzees, with a special focus on group composition, social relationships, interactions with neighbouring groups, hunting behaviour, tool use and communicative skills. Lethal encounters between the chimpanzees and gorillas had never been documented in the past. However, in encounters observed in 2019, the chimpanzees formed coalitions and attacked the gorillas. The silverbacks and adult females defended themselves and their offspring, but two gorilla infants were separated from their mothers and killed by the chimpanzees. Whether this behaviour is a result of competition for food or the decline of the rainforest's productivity caused by climate change will be investigated in more detail.

Sources: Scientific Reports (2021) doi.org/10.1038/s41598-021-93829-x & *Max-Planck-Gesellschaft* (2021) mpg.de/17223684/0719-evan-lethal-attacks-by-chimpanzees-on-gorillas-observed-150495-x

Dozens of Endangered penguins killed by bees in South Africa

A swarm of bees has killed 63 Endangered African penguins *Spheniscus demersus* on a beach outside Cape Town, South Africa, in September 2021. There were no signs of external physical injuries on any of the birds, but some of the animals were found with 20 or more bee stings. The area is a national park and the Cape honey bees are part of the native ecosystem. Authorities were searching for the hive to find out what may have triggered the bee attack. A clinical veterinarian stated this was a very rare occurrence. The penguins, also known as Cape, black-footed or jackass penguins, breed in South Africa and neighbouring Namibia. In the past 3 decades, the number of penguins living in South Africa has dropped by 73% to 10,400 pairs, according to the Foundation for the Conservation of Coastal Birds in Southern Africa. In Namibia, there are c. 4,300 penguin pairs left.

Source: Al Jazeera (2021) aljazeera.com/news/2021/9/20/bees-kill-dozens-of-endangered-penguins-in-south-africa

AMERICAS

New marmoset species discovered in Brazilian Amazon

A team of scientists led by Rodrigo Costa Araújo has discovered a new marmoset species in the Brazilian Amazon. Schneider's marmoset *Mico schneideri* is named after professor Horacio Schneider, a pioneer and major contributor to the research on diversity and evolution of monkeys. There is currently no conservation action to address the habitat losses and population declines that the marmosets face, primarily because they are poorly studied. The total number of Amazon marmoset species remains unknown. In 2019 Araújo and his team discovered the Munduruku marmoset *Mico munduruku* in another area. *Mico schneideri* was described from marmosets known to researchers since 1995 but misidentified as *Mico emiliae*. The study notes the existence of 16 *Mico* species occurring in the arc of deforestation, an extensive region in the southern Amazon with the highest rates of land clearing and fires. Further research is needed to assess the conservation status of *M. schneideri* and to investigate the southern portion of its geographical distribution.
Sources: Scientific Reports (2021) doi.org/10.1038/s41598-021-93943-w & *WCS Newsroom* (2021) newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/16462/New-Marmoset-Species-Discovered-in-Brazilian-Amazon.aspx

Unusual wolverine sightings in northern Utah

A wolverine *Gulo gulo*, and possibly a second one, was observed far to the south of the species' normal range and in highly atypical habitats. The initial sighting was on Antelope Island State Park, in the Great Salt Lake in Utah, USA, in May 2021. The second sighting, probably of the same individual, was in July in a suburban neighbourhood in Layton, Utah. This is close to Antelope Island, which is connected to the mainland by a causeway. It is not known if there is an established population in Utah. Since 1979, there have been six confirmed sightings in the state. This individual, assuming these sightings were of the same one, might be a transient male. Wolverines have extensive home ranges and are primarily found in boreal forests, tundra, and the mountains of Alaska and Canada. Only several hundred are believed to occur in the lower 48 states of the USA.
Source: The Salt Lake Tribune (2021) sltrib.com/news/2021/07/03/second-wolverine-sighting

Pact to protect Amazon rainforest shows limited progress

Two years since seven South American nations signed the landmark Leticia Pact to protect the world's largest rainforest, there is scant evidence to suggest its pledges are being fulfilled. Signed by Amazon countries Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru and Suriname, the pact's aims include a move toward sustainable forest use and reforestation, restoration of degraded land, empowerment of women and Indigenous groups, improved information-sharing and the use of satellite data to monitor deforestation and wildfires. Despite these good intentions, deforestation continues to surge across the region, with illegal mining, expansion of cattle ranching and farms, and drug trafficking still widespread, and ongoing problems to attract the funding required to tackle these fundamental threats to the rainforest. Scientists and campaigners point to the lack of significant achievements since the pact was signed, and a failure among signatory states to invest sufficient funds or implement regional coordination.
Source: Al Jazeera (2021) aljazeera.com/economy/2021/9/6/landmark-pact-to-protect-amazon-rainforest-shows-little-progress

Trapping of North American river otters *Lontra canadensis*

Otters were once heavily hunted for their luxurious fur. As a consequence of unsustainable exploitation, North American river otters *Lontra canadensis* disappeared from much of their former range, and considerable conservation efforts were made to restore populations in 24 American and Canadian states/provinces. Of these, only five still prohibit otter trapping, and it is illegal in only eight regions out of 61. A review based on 2013–2018 harvest numbers, prices and numbers sold from the Fur Harvesters Auction Inc website, and import numbers from the CITES Trade Database, showed otter trapping numbers decreased during that time. This was largely because of reduced demand, leading to lower prices. Should demand and prices increase, then harvests would quickly rise. Without sound scientific data, trapping cannot be considered sustainable, especially given the pressures from other factors such as habitat loss, pollution and lack of prey, which could lead to a sudden drop in otter populations.
Source: OTTER (2021) otter.org/documents/journals/IOSF_Journal_Vol7_2021.pdf

Heat dome probably killed 1 billion marine animals on Canada coast

More than 1 billion marine animals along Canada's Pacific coast are likely to have died from July's record heatwave, highlighting the vulnerability of ecosystems unaccustomed to extreme temperatures. The heat dome that settled over western Canada and the north-western USA for 5 days pushed temperatures along the coast to 40 °C, and is believed to have killed as many as 500 people. Experts fear the intense and unrelenting heat also had a devastating impact on marine life. Mussels along the coast were effectively cooked by the abnormally warm water, and snails, sea stars and clams decayed. The mass death of shellfish would affect water quality because mussels and clams filter the sea water. Although mussels can regenerate over a period of 2 years, some starfish and clams live for decades, and they reproduce more slowly, so their recovery will take longer. Experts have cautioned that the province needs to adapt to the reality that sudden and sustained heatwaves are likely to become more common as a result of climate change.
Source: The Guardian (2021) theguardian.com/environment/2021/jul/08/heat-dome-canada-pacific-northwest-animal-deaths

Amazon eagle faces starvation in last stronghold

Conservationists say the largest eagle of the Americas has nearly zero chance of surviving Amazon deforestation. According to a new study, the harpy eagle *Harpia harpyja* is struggling to feed its young in parts of the rainforest that have been stripped of trees. The researchers monitored 16 nests in Amazonian forests in Mato Grosso, Brazil. Bone fragments revealed the eagles were preying mainly on two-toed sloths, brown capuchin monkeys and grey woolly monkeys. In deforested areas they did not find alternative food, and fed their young less frequently. In landscapes with 50–70% deforestation, three eaglets died from starvation, and no nests were found in areas with deforestation over 70%. The scientists calculated that areas that have lost more than half their trees are unsuitable for harpy eagles and estimated that c. 35% of northern Mato Grosso no longer supports breeding harpy eagles. Conservation measures, such as moving young eagles and supplementing their diets, will be critical to the survival of the species.
Sources: Scientific Reports (2021) doi.org/10.1038/s41598-021-92372-z & *BBC* (2021) bbc.com/news/science-environment-57665575

ASIA & OCEANIA

Poaching of Critically Endangered songbirds in Indonesia

A new study highlights the emerging trade in grey-backed mynas *Acridotheres tricolor* sold online as so-called Baluran locals, indicating ongoing poaching in Indonesia's Baluran National Park. Located in East Java, the Park is the most important stronghold for the grey-backed myna, with population estimates ranging from a few dozen birds to 140–220 individuals. During April 2020–March 2021, the study's authors recorded a minimum of 19 individuals offered for sale on Indonesian social media platforms. These trade records were collected opportunistically and may only represent a proportion of actual trade volumes during the time period. Considering the dire conservation status of Baluran's grey-backed mynas, any trade in wild-caught individuals should be treated seriously and countered immediately. This study was part of the Monitor Songbird Lab, a research cooperation involving the EAZA Silent Forest Group and Monitor Conservation Research Society.

Source: Monitor Conservation Research Society (2021) mcrsociety.org/2021/06/28/online-trade-records-of-grey-backed-myna-acridotheres-tricolor-indicate-poaching-practices-in-baluran-national-park-indonesia

Implementation of the One Plan Approach to safeguard Critically Endangered Philippine crocodile

The Philippine crocodile *Crocodylus mindorensis* is among the rarest and most threatened crocodiles. To restore wild populations, a first repatriation from the European Studbook, established by the European Association of Zoos and Aquaria in 2012, was performed in December 2020. The two Philippine crocodiles hatched in Cologne Zoo, Germany, in 2015. As they were genetically purebred and grew up with their mother and thus were well socialized, they were perfectly suited for repatriation and were prepared for release in a semi-wild facility. The Philippine Department of Environment and Natural Resources, with Crocodylus Porosus Philippines Inc., plan further repatriations. This is a promising example of the One Plan Approach, which is supported by the IUCN and aims at developing integrative strategies to combine in situ and ex situ measures with groups of experts for species conservation.

Source: WAZA Magazine (2021) waza.org/wp-content/uploads/2021/04/WAZA-magazine-2021-01.pdf

Critically Endangered saiga antelope makes comeback

The population of a rare type of antelope has more than doubled since 2019, in a remarkable turnaround of fortunes. According to the first aerial survey in 2 years, the number of saiga in their Kazakhstan heartland has risen from 334,000 to 842,000. There were fears the animal was on the brink of extinction following a mass die-off in 2015. But after a series of conservation measures, including a government crackdown on poaching, and local and international conservation work, numbers have started to bounce back. That, together with the natural resilience of the species, gives hope for its future. Fauna & Flora International has been involved in efforts to protect the Ustyurt population by establishing a new anti-poaching ranger team and using satellite collaring to monitor saiga movements. The new census was the best evidence yet that decades of conservation efforts to protect the saiga were paying off.

Source: BBC (2021) bbc.com/news/science-environment-57688320

Fourteen threatened amphibian species found in Silent Valley, Kerala

In July 2021, the first detailed survey of herpetofauna in the Silent Valley National Park in Kerala, India, found 40 species of amphibians and 30 species of reptiles. With this, the total known reptile and amphibian fauna of Silent Valley has become 55 species each. Wayanad bush frog, leaping frogs, cricket frogs, Malabar vine snake and common house gecko were among the commonly observed species. An important observation was the reduced presence of torrent frogs of the genus *Micrixalus*. Even in parts of Kerala such as Wayanad, their numbers seem to have reduced following the floods in 2018 and 2019. Of the species recorded in the survey, 14 amphibian species, including the Ponmudi bush frog, are categorized as threatened on the IUCN Red List. The purple frog, which has potential to be the state amphibian of Kerala, was recorded from many parts of the Silent Valley. These animals can act as biological indicators that shed light onto the changing climate and environment.

Source: Times of India (2021) timesofindia.indiatimes.com/articleshow/84931031.cms

New DNA study provides critical information on rainforest lizards

Rough-nosed horned lizards *Ceratophora aspera* are small lizards endemic to Sri Lankan rainforests. They are particularly well suited to examine the consequences of rainforest habitat destruction, climate change and the pet trade, as they are found throughout the lowland rainforests of south-western Sri Lanka. By analysing certain types of mutations in the genome of these lizards, researchers were able to determine how geography and historical events affect the distribution of the remaining wild populations of the species. The team acquired DNA by a catch-and-release approach: they captured wild lizards and took tissue samples from the tips of their tails before releasing them back to the wild. The results from the DNA analysis found rough-nosed horned lizards are separated by distance into four forest groups: Southern Lowlands, Sabaragamuwa Hills, Central Highlands and Kithulgala. With the Sri Lankan government pledging to restore rainforest habitats, the findings of this study can help inform guidelines for forest landscape restoration.

Sources: Biotropica (2021) doi.org/10.1111/btp.12970 & *ScienceDaily* (2021) sciencedaily.com/releases/2021/08/210802160707.htm

Conifer may hold the key to kākāpō recovery

Once the third most common bird in New Zealand, the kākāpō has seen its numbers reduced to less than 150. For a time, this large, flightless parrot was thought to be extinct. Serious effort has been put forth to try and recover this species from the brink of extinction. Kākāpō breeding efforts are conspicuously tied to the phenology of certain trees, particularly the endemic rimu *Dacrydium cupressinum*. This evergreen tree is one of the most important food sources for breeding kākāpō. It is a common observation that kākāpō only tend to breed when trees like the rimu experience reproductive booms. The fruits and seeds they produce are an important component of the diets of not only female kākāpō, but also their developing chicks. If these fruits really are the trigger needed to bring female kākāpō into good shape for breeding and raising chicks, this may make breeding kākāpō in captivity much easier.

Source: In Defense of Plants (2021) indefenseofplants.com/blog/2018/11/1/how-a-tropical-conifer-may-hold-the-key-to-kkp-recovery

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 David Brugiere, Simon Bruslund, Roman Lyach, Annkathrin Sharp, Ben Yoxon, Sam Zeveloff and Thomas Ziegler. Contributions from authoritative published sources (including websites) are always welcome. Please send contributions by e-mail to oryx@fauna-flora.org.