

Briefly

SPOTLIGHT ON CLIMATE

Drought in Europe: rivers run dry...

Across Europe, drought has reduced once-mighty rivers to trickles, with potentially dramatic consequences. The Loire, the longest river in France, could be crossed on foot in places; in Italy, the Po was 2 m lower than normal; Serbia dredged the Danube. Driven by climate breakdown, an unusually dry winter and spring, followed by record-breaking summer temperatures and repeated heatwaves, have left Europe's essential waterways under-replenished and, increasingly, overheated. With no significant rainfall recorded for almost 2 months across western, central and southern Europe, the drought could be the continent's worst in > 500 years. Low water levels in Europe's rivers present a major challenge for freight transport: although the EU has said boosting waterborne freight by 25% is one of its green transition priorities, Germany is now working to divert it to rail and road. Apart from the economic impacts, low river levels and high water temperatures can prove fatal to many species, further exacerbating the biodiversity crisis.

Source: *The Guardian* (2022) [theguardian.com/environment/2022/aug/13/europes-rivers-run-dry-as-scientists-warn-drought-could-be-worst-in-500-years](https://www.theguardian.com/environment/2022/aug/13/europes-rivers-run-dry-as-scientists-warn-drought-could-be-worst-in-500-years)

... and large-scale wildfires rage

Across Europe, an area equivalent to one-fifth of Belgium has been ravaged by flames as successive searing heatwaves and a historic drought propel the continent towards what experts say is likely to be a record year for wildfire destruction. According to data from the European Forest Fire Information System (EFFIS), 659,541 ha of land burned across the continent between January and mid August, the most at this time of year since records began in 2006. The figure is 56% higher than the previous record in 2017. Then, 420,913 ha burned over the same period, and 988,087 ha by the end of the year. On present trends, more than 1 million ha could be lost to wildfires this year. Wildfires in the EU have historically occurred mainly in countries in the Mediterranean region, but since 2010 fires have been blazing in central and northern countries that normally do not experience fires in their territory.

Source: *The Guardian* (2022) [theguardian.com/world/2022/aug/15/wildfires-europe-burn-area-equivalent-one-fifth-belgium](https://www.theguardian.com/world/2022/aug/15/wildfires-europe-burn-area-equivalent-one-fifth-belgium)

Scientists welcome US climate bill

Several US agencies, including the National Oceanic and Atmospheric Administration (NOAA) and the Department of Energy, will see a significant influx of cash from a new climate and tax bill that President Joe Biden signed in August. Scientists welcomed the Inflation Reduction Act, which pledges USD 369 billion in climate investments over the next decade, but also stated that more work is needed to counter global warming. The legislation would cut US greenhouse gas emissions by c. 30–40% below 2005 levels by 2030, bringing the country closer to delivering on its pledge of a 50% reduction. The Inflation Reduction Act allocates c. USD 490 million for climate and weather forecasting at NOAA, including USD 50 million for climate research grants. Through a competitive grant programme, it also funds research into eco-friendly jet fuel, thereby curbing emissions from air travel. It provides USD 60 billion in grants and tax credits for clean energy investments and projects to clean up pollution in disadvantaged communities.

Source: *Nature* (2022) [nature.com/articles/d41586-022-02223-8](https://www.nature.com/articles/d41586-022-02223-8)

Irreversible declines in freshwater storage projected in parts of Asia by 2060

The Tibetan Plateau, often referred to as the water tower of Asia, supplies freshwater for nearly two billion people. New research projects that climate change, under a scenario of weak climate policy, will cause irreversible declines in freshwater storage in the region, leading to a total collapse of the water supply for central Asia and Afghanistan and a near-total collapse for northern India, Kashmir and Pakistan by the middle of the century. Despite its importance, the impacts of climate change on past and future terrestrial water storage, which includes all the water above and below ground, in the Tibetan Plateau have largely been underexplored. The research team found that climate change in recent decades has led to severe depletion in terrestrial water storage (a reduction of 15.8 gigatons/year) in certain areas of the Tibetan Plateau and substantial increases (5.6 gigatons/year) in terrestrial water storage in others. These patterns are probably caused by the competing effects of glacier retreat, degradation of seasonally frozen ground, and expansion of lakes.

Source: *Science Daily* (2022) [sciencedaily.com/releases/2022/08/220815112815.htm](https://www.sciencedaily.com/releases/2022/08/220815112815.htm)

African wildlife parks under threat from climate change

Africa's national parks, home to iconic wildlife species such as lions, elephants and buffaloes, are increasingly threatened by below-average rainfall and new infrastructure projects, stressing habitats and the species that rely on them. A prolonged drought in much of the continent's east, exacerbated by climate change, and large scale developments, including oil drilling and livestock grazing, are hampering conservation efforts in protected areas, several environmental experts say. The at-risk parks stretch from Kenya in the east, home to Tsavo and Nairobi National Parks, south to the Mkomazi and Serengeti parks in Tanzania, the Quirimbas and Gorongosa parks in Mozambique and the famous Kruger National Park in South Africa, and west to the Kahuzi Biega, Salonga and Virunga reserves in Congo. The parks not only protect flora and fauna but also act as natural carbon sinks. An estimated 38% of Africa's biodiversity areas are under severe threat from climate change and infrastructure development.

Source: *National Observer* (2022) [nationalobserver.com/2022/08/11/news/african-wildlife-parks-threat-climate-change](https://www.nationalobserver.com/2022/08/11/news/african-wildlife-parks-threat-climate-change)

Global heating threatens sea turtles as sex ratio shifts to more females

Sea turtles live in the ocean but come up onto beaches to lay their eggs in the sand. The temperature of the sand determines whether an egg becomes a male or female turtle: when it is cooler, more eggs become males, whereas more of the eggs become females in warmer sand. As the planet is getting hotter, a lot more turtles in key nesting sites are being born female. The precise temperature at which the sex ratio becomes severely skewed differs between species and locations, but at c. 29 °C, there is often a 50:50 split between male and female hatchlings. As temperatures rise globally, there are more female turtles. This is called feminization, and it could be a long-term threat to sea turtles, as both males and females are needed to reproduce. The same issue may also threaten other reptiles with temperature-dependent sex determination, such as alligators. Potential mitigations include providing more shade on beaches, covering nests in lighter-coloured sand or moving nests to cooler spots.

Source: *Independent* (2022) [independent.co.uk/climate-change/news/sea-turtles-florida-global-warming-b2139288.html](https://www.independent.co.uk/climate-change/news/sea-turtles-florida-global-warming-b2139288.html)

INTERNATIONAL

Large groups of southern fin whales observed in Antarctica . . .

In two expeditions to Antarctica in 2018 and 2019, researchers recorded 100 groups of fin whales *Balaenoptera physalus*, ranging from small gatherings of a few individuals to eight large congregations of up to 150 individuals, feeding on masses of krill. Previously recorded feeding groups of the world's second-largest animal numbered a maximum of around a dozen whales. Scientists estimate that the global fin whale population was reduced to 1–2% of its original size by centuries of whaling. Although their numbers have increased since the 1970s whaling ban, there have been few sightings of these animals in large groups at their historic feeding grounds, and given their long life-spans and slow reproduction, recovery is a slow process. The survey data collected on the expedition suggest there could now be almost 8,000 fin whales in the Antarctic area. Fin whales are categorized as Vulnerable on the IUCN Red List and the global population is estimated to be c. 100,000, with most of these whales inhabiting waters in the northern hemisphere.

Source: *The Guardian* (2022) [theguardian.com/environment/2022/jul/08/vast-group-of-southern-fin-whales-filmed-feeding-in-antarctica-sparking-hope-of-recovery](https://www.theguardian.com/environment/2022/jul/08/vast-group-of-southern-fin-whales-filmed-feeding-in-antarctica-sparking-hope-of-recovery)

. . . but climate change and overfishing threaten Antarctic krill

Once described as limitless in number, the filter-feeding Antarctic krill *Euphausia superba* is one of the most abundant species in the world, but its populations are under pressure. These tiny crustaceans of the Southern Ocean play a critical role in maintaining planetary health by storing carbon and providing food for a vast web of species. They are also fished in increasing amounts to meet demand for use in global aquaculture and the production of krill oil. Scientists and conservationists are concerned about the future of the species because of overfishing, climate change and other anthropogenic threats. Some experts have called on the group responsible for regulating krill fishing in the Southern Ocean, the Commission for the Conservation of Antarctic Marine Living Resources, to revise its generous catch limits. Others are calling for a moratorium on krill fishing before overexploitation leads to irreversible impacts on krill populations.

Source: *Mongabay* (2022) news.mongabay.com/2022/08/climate-change-and-overfishing-threaten-once-endless-antarctic-krill

The Arctic is warming four times faster than the rest of the planet

New data indicate that the Arctic is warming four times faster than the Earth as a whole, a significant update compared to earlier estimates. Until recently, scientific studies and news reports have typically reported that temperatures there are rising at about 2–3 times the global average rate. A new study found that the Arctic Circle has warmed by > 2.8 °C since 1979, at about four times the global average rate over the last 43 years. It is one of several recent studies that have all come to similar conclusions. Even if Arctic amplification, the phenomenon that the Arctic warms at higher rates than the rest of the planet, slows down in the future, the region will still have fundamentally changed and temperatures will have already risen dramatically. The region will also likely continue on warming, but possibly not at four times the global average.

Sources: *Communications Earth & Environment* (2022) doi.org/10.1038/s43247-022-00498-3 & *Scientific American* (2022) [scientificamerican.com/article/the-arctic-is-warming-four-times-faster-than-the-rest-of-the-planet](https://www.scientificamerican.com/article/the-arctic-is-warming-four-times-faster-than-the-rest-of-the-planet)

Impacts of Covid-19-related plastics on wildlife

A study using community science observations from around the world found that disposable face masks and plastic gloves could pose an ongoing risk to wildlife for tens if not hundreds of years. Entanglement was one of the most prevalent threats, with some animals being killed after becoming caught in the plastic debris. The study captured 114 observations, and it is likely that it represents just a fraction of the much larger impacts of Covid-19-related waste on wildlife. With an estimated global demand of over 129 billion masks per month at the height of the pandemic, the effect of pandemic waste will become more pronounced as even more plastic works its way into our ecosystems. As levels of litter increased, wildlife struggling with pandemic-related debris became more common. The litter has also been linked to wildlife deaths, with one of the first reported cases believed to be an American robin found dead in Canada in April 2020 after becoming entangled in a face mask. Even if not the direct cause of death, litter can weaken wild animals and make them more susceptible to fatal injuries.

Sources: *Science of The Total Environment* (2022) doi.org/10.1016/j.scitotenv.2022.157614 & *The Natural History Museum* (2022) nhm.ac.uk/discover/news/2022/august/pandemic-face-masks-could-harm-wildlife-for-years-to-come.html

Research on diverse tree genus will help conservation

An international study that analysed the world's most species-rich tree genus, *Syzygium*, has made breakthrough findings. More than 60 researchers explored the evolution and speciation patterns of *Syzygium*, using samples from species growing in Africa, Sri Lanka, Malaysia, Singapore, Indonesia, Japan, Australia and the Pacific Islands. Trees growing in tropical areas are among the most valuable in protecting biodiversity, but they are threatened because of commercial exploitation and habitat loss. The new study contributes to the understanding of how plant species have emerged in the past in response to environmental changes. This knowledge is valuable for predicting how plants may respond to ecological changes brought about by climate change and will guide conservation and management efforts for plant communities. Because of their diversity, *Syzygium* species play a vital role in the functioning of forest ecosystems. Many are also cultivated in tropical countries for different types of spices, such as cloves, or their large, edible fruits.

Sources: *Nature Communications* (2022) doi.org/10.1038/s41467-022-32637-x & *University of Aberdeen* (2022) abdn.ac.uk/news/16313

New report highlights opportunities for conservation of ladybirds globally

A report into the global status of ladybirds reveals the threats they face and lays out a roadmap for their conservation. These beetles are considered to be in decline globally because of human activities, and many species are poorly understood. The research was compiled by an international group of experts, including ecologists at the UK Centre for Ecology & Hydrology, the University of the Azores and Ghent University, as well as all members of the IUCN Species Survival Commission Ladybird Specialist Group. It identifies gaps in knowledge about how ladybirds are responding to environmental changes affecting global biodiversity and suggests actions to protect the charismatic beetles and other insects. The ladybird family, Coccinellidae, includes > 6,000 species globally. Many of these species play an important role in protecting plants, including crops, from the ravages of pest insects such as aphids. The study's authors hope they can entice more researchers to become involved in studying ladybirds and assessing the ecological threats that affect their diversity and abundance.

Source: *Science Daily* (2022) [sciencedaily.com/releases/2022/08/220825094907.htm](https://www.sciencedaily.com/releases/2022/08/220825094907.htm)

EUROPE

Making a comeback: rewilding in Europe gets a funding boost...

The environmental organization Rewilding Europe is looking to expand its number of rewilding landscapes—areas where threatened wildlife is reintroduced and protected—after being awarded a grant of GBP 4.1 million by the Arcadia Fund, a charitable fund of Lisbet Rausing and Peter Baldwin. The grant has been pledged in the hope of scaling up rewilding efforts throughout several parts of the continent. Rewilding can have benefits for local economies, for example through wildlife and nature-related tourism, such as the European Safari Company, whose locations include several Rewilding Europe landscapes. The non-profit organization already operates projects in the Affric Highlands in Scotland, Swedish Lapland, the southern Carpathians in Romania and the Greater Côa Valley in Portugal. With the help of the funding, a new rewilding landscape will be launched at the end of the year, and a further five should be opened before 2030.

Source: *The Guardian* (2022) [theguardian.com/environment/2022/jul/29/making-a-comeback-rewilding-in-europe-gets-a-4m-funding-boost](https://www.theguardian.com/environment/2022/jul/29/making-a-comeback-rewilding-in-europe-gets-a-4m-funding-boost)

... and wild bison return to UK for first time in thousands of years

In July 2022, three gentle giants wandered out of a corral in the Kent countryside to become the first wild bison to roam in Britain for thousands of years. The aim is for the animals' natural behaviour to transform a dense commercial pine forest into a vibrant natural woodland. Their taste for bark will kill some trees and their bulk will open up trails, letting light spill onto the forest floor, while their love of rolling around in dust baths will create more open ground. All this should allow new plants, insects, lizards, birds and bats to thrive. The Wilder Blean project, near Canterbury, is an experiment to see how well the bison can act as natural ecosystem engineers and restore habitats for wildlife. The UK is one of the most nature-depleted countries in the world. A more natural woodland should also absorb more carbon, helping to tackle the climate crisis. The three released females were fitted with tracking collars that will allow researchers to plot the animals' movements and glean insights into their interactions with vegetation and the wider environment.

Source: *The Guardian* (2022) [theguardian.com/environment/2022/jul/18/wild-bison-return-to-uk-for-first-time-in-thousands-of-years](https://www.theguardian.com/environment/2022/jul/18/wild-bison-return-to-uk-for-first-time-in-thousands-of-years)

New species of giant waterlily discovered at Kew Gardens

A breaking botanical discovery has come to light, as the famous giant waterlily genus *Victoria* welcomes a new species. *Victoria boliviana* has been in Kew's Herbarium for 177 years, previously mistaken for *Victoria amazonica*, the waterlily named after England's Queen Victoria in 1837. A team of experts now found that *Victoria boliviana* is a species new to science, and is now the largest waterlily in the world, with leaves reaching 3 m wide in the wild. As the name suggests, it is native to Bolivia, where it grows in one of the largest wetlands in the world, the Llanos de Moxos. In 2016, two Bolivian institutions donated seeds from a suspected new species of waterlily. As these were grown at Kew Gardens in the UK, side-by-side with the two other known *Victoria* species, the differences became evident: *Victoria boliviana* has a different distribution of prickles, and its seeds are a different shape from those of the other members of the genus, making it distinct.

Source: *Royal Botanic Gardens Kew* (2022) [kew.org/read-and-watch/new-giant-waterlily-victoria-boliviana-discovered-at-kew](https://www.kew.org/read-and-watch/new-giant-waterlily-victoria-boliviana-discovered-at-kew)

Balkan activists keep fighting for Europe's last wild rivers

It took a decade of court battles and street protests, but Balkan activists fighting to protect some of Europe's last wild rivers have scored an important conservation victory in Bosnia. A new electricity law, which passed in July, bans the further construction of small hydroelectric power plants in the larger of Bosnia's two semi-independent entities. Still, the new law only highlights the long road ahead to protect such rivers across the entire Balkans from being degraded, diverted and commercialized by people with connections to the region's corruption-prone political elite. Since it was launched in 2013, the campaign has brought together environmental activists, conservation groups and local people to jointly fight for protection of what it calls one of the most important spots for European biodiversity. There are over 28,000 km of waterways in pristine or near-natural state in the Balkans, with extensive gravel banks, untouched alluvial forests, deep gorges, spectacular waterfalls and even karstic underground rivers. Overall, more than 2,700 large and small hydropower plants are projected to be built on these Balkan rivers, including some inside national parks.

Source: *Independent* (2022) [independent.co.uk/news/ap-europe-sarajevo-people-vienna-b2119747.html](https://www.independent.co.uk/news/ap-europe-sarajevo-people-vienna-b2119747.html)

Pet cats classified as invasive alien species by scientific academy

The Polish Academy of Sciences now maintains that from a purely scientific perspective, domesticated cats in Europe, and therefore in Poland, should be considered an invasive alien species. *Felis catus* was domesticated c. 10,000 years ago in the ancient civilizations of the Near East. The presence of cats in Europe is a result of human activity, meaning it can be classified as an alien or non-native species to Europe. The Institute of Nature Conservation in Poland noted the clear scientific evidence of the negative impact that domesticated cats have on native biodiversity, leading to their classification as invasive. Poland's alien species database includes almost 1,800 species, many of which are classified as invasive, although this does not necessarily mean they are a threat to wildlife in Poland or the EU. One of the easiest ways pet owners can reduce the impact of their cats on native wildlife is to limit how much time cats can roam freely, especially during bird breeding seasons.

Source: *Tweak Town* (2022) [tweaktown.com/news/87724/pet-cats-classified-as-invasive-alien-species-by-scientific-academy/index.html](https://www.tweaktown.com/news/87724/pet-cats-classified-as-invasive-alien-species-by-scientific-academy/index.html)

Blue tits in France less colourful than 15 years ago

Researchers have found that blue tits in two separate populations in southern France, one near Montpellier and one in the north-west of Corsica, are on average less colourful now than 15 years ago. The researchers gathered over 5,800 observations on several characteristics of the blue tits, including their striking colouration: the birds have a blue crest and a yellow breast. The results showed a decrease in the intensity of these colours in both populations over the study period from 2005 to 2019. The change in plumage colour was associated with a rise in temperature and a decrease in rainfall, suggesting a potential effect of climate change. The observed trend towards duller colours was more pronounced in male than female tits. Although the physiological processes behind these associations are not yet fully understood, a potential driver could be a reduction in food availability or quality during hot and dry summers. Further research is needed to examine the link between climate and ornamental traits in other bird species and other taxa, to elucidate the mechanisms linking climate to the observed phenotypic changes.

Sources: *The American Naturalist* (2022) doi.org/10.1086/719655 & *Independent* (2022) [independent.co.uk/climate-change/news/birds-colour-change-climate-change-b2137877.html](https://www.independent.co.uk/climate-change/news/birds-colour-change-climate-change-b2137877.html)

AFRICA

Hippopotamuses may join list of most threatened animals

Hippopotamuses could be added to the list of the world's most threatened animals because of dwindling populations caused by the climate crisis, poaching and the ivory trade. The semi-aquatic mammals occur in lakes and rivers across sub-Saharan Africa, with an estimated population of 115,000–130,000. They are threatened by trade in their ivory and other parts, habitat loss and degradation, and the effects of global heating. Hippopotamuses are also legally traded for commercial purposes and hunting trophies, being currently listed in CITES Appendix II, which means they are not considered immediately threatened with extinction but could become so if their trade is not regulated. Ahead of the next CITES Conference of Parties in Panama in November 2022, 10 west African countries have proposed that hippopotamuses be given the highest protection by listing them in Appendix I of the convention. If approved, it would mean a total ban on the international trade in hippopotamus body parts and ivory. *Source: The Guardian (2022) [theguardian.com/environment/2022/aug/02/call-for-hippos-to-join-list-of-worlds-most-endangered-animals-aoe](https://www.theguardian.com/environment/2022/aug/02/call-for-hippos-to-join-list-of-worlds-most-endangered-animals-aoe)*

Smartphone app aiding patrol efforts in a Cameroon National Park

Conservationists from Bristol Zoological Society have been training eco-guards in Bénoué National Park, Cameroon, to use a smartphone app, alongside camera trapping, to record illegal activities such as cattle herding, mining and hunting. Working in partnership with Cameroonian NGO Sekakoh and the Park's Conservation Service, the team have instigated a new data-driven patrol strategy to direct eco-guards to areas with the highest threat levels. The app, called SMART (Spatial Monitoring and Reporting Tool), has been developed by an international partnership of conservationists and is used across the world to improve law enforcement in protected areas by enabling park managers to map out the presence of illegal activity and adapt the patrol effort of their teams accordingly. It is hoped that the app will aid the Park's conservation management strategy by highlighting priority areas and optimizing patrol efforts, helping to protect its threatened wildlife populations, which include the Critically Endangered Kordofan giraffe and Vulnerable giant eland.

Source: Bristol Zoo (2022) [bristolzoo.org.uk/latest-zoo-news/bristol-zoo-conservationists-trip-to-cameroon-to-help-save-giraffes](https://www.bristolzoo.org.uk/latest-zoo-news/bristol-zoo-conservationists-trip-to-cameroon-to-help-save-giraffes)

South Africa still falling short of marine protection goals

More than 5% of South Africa's marine areas are protected, but the country still has a long way to go to meet its international obligations, according to conservationists. South Africa has 41 marine protected areas (MPAs), which make up 5.4% of its ocean and coast. These areas are similar to game reserves that protect land animals and plants, but they protect the ocean and threatened marine species instead. They also counteract overfishing by protecting vital spawning and nursery areas, providing a safe haven in which marine wildlife can mature to adulthood. In August 2022, the second annual MPA Day took place. The formerly national event was set to go global. Although conservationists have celebrated achievements to protect the ocean, there is still much more that needs to be done: South Africa made an international commitment to protect at least 10% of its marine areas. It is hoped that this will increase to more than 20% by 2037, as South Africa reviews its legislation and targets around protected wildlife spaces.

Source: News 24 (2022) [news24.com/news24/southafrica/news/sa-not-the-worst-but-still-falling-short-of-marine-protection-goals-conservationists-20220802](https://www.news24.com/news24/southafrica/news/sa-not-the-worst-but-still-falling-short-of-marine-protection-goals-conservationists-20220802)

Five Southern African countries kick-start elephant census

Five countries in Southern Africa, which together harbour more than half the continent's elephants, conducted a first-ever aerial census to determine the size of their elephant populations and how to protect them. Light aircraft flew simultaneously across the plains of Angola, Botswana, Namibia, Zambia and Zimbabwe, in a conservation area known as the Kavango–Zambezi Trans-frontier Conservation Area (KAZA). KAZA is home to an estimated 220,000 elephants, and the five countries aimed to establish the iconic animals' exact numbers and distribution patterns. More than 130,000 elephants live in Botswana, which has the largest elephant population globally. The population count will be key in the management of the elephants. The data will primarily be used to guide decision-making by the five partner states, including land-use planning, managing human–elephant interactions, hunting and tourism. The exercise is critical for a region with a high number of trans-boundary elephants and will help design a scientific approach to the management of elephant populations.

Source: VOA News (2022) [voanews.com/a/five-southern-african-countries-kick-start-elephant-census-/6693114.html](https://www.voanews.com/a/five-southern-african-countries-kick-start-elephant-census-/6693114.html)

Poachers kill more rhinoceroses in South Africa to meet Asian demand

South Africa has seen an increase in the number of rhinoceroses illegally killed for their horns in the first half of 2022, as poachers shifted to hunting in private parks. Ten more individuals were poached countrywide than in the first half of last year, taking the total to 259. Poaching in South Africa had already risen last year after a fall in 2020 linked to Covid-19 restrictions. South Africa accounts for about half of the total population of the Endangered black rhinoceros and is also home to the world's largest population of white rhinoceroses, which are categorized as Near Threatened on the IUCN Red List. Conservation efforts and vigilance have increased in Kruger National Park, leading poachers to shift to hunting in private parks and the KwaZulu-Natal province, data from the South Africa's environment ministry showed. Rhinoceros poaching often involves both local poachers and international criminal syndicates, who smuggle the horns across borders. The ministry said demand is particularly high in Asia.

Source: Cyprus Mail (2022) [cyprus-mail.com/2022/08/01/poachers-kill-more-rhinos-in-south-africa-to-meet-asian-demand](https://www.cyprus-mail.com/2022/08/01/poachers-kill-more-rhinos-in-south-africa-to-meet-asian-demand)

Africa's wildlife park managers meet in Kigali to boost conservation

African officials met at the first-ever Africa Protected Areas Congress in Kigali, Rwanda, in July 2022. Their aim was to expand wildlife conservation efforts, despite challenges posed by underfunding and low-quality conservation areas in the region. Just 14% of Africa's land and inland water ecosystems and 17% of coastal and marine areas are protected. The continent currently has 9,118 protected areas. More than 100 countries worldwide have ambitions to expand conservation efforts and protect wildlife. Climate change, the decline in quality of protected areas because of underfunding, and the growth of infrastructure development in protected areas are threatening biodiversity in Africa, and those working on the front lines of conservation are facing increasing challenges. The congress brought together managers of wildlife parks and reserves, scientists, and Indigenous and community leaders. It is hoped that increasing the communication and collaboration between stakeholder groups will improve the health of Africa's biodiversity hotspots and combat worrying trends, such as the increase in poaching and the illegal wildlife trade.

Source: Al Jazeera (2022) [aljazeera.com/news/2022/7/19/africas-wildlife-parks-managers-meet-to-boost-conservation](https://www.aljazeera.com/news/2022/7/19/africas-wildlife-parks-managers-meet-to-boost-conservation)

AMERICAS

Thousands of dead migrant seabirds wash up on Canada's shore

The carcasses of thousands of migrant seabirds washed up on the shores of eastern Canada in July 2022, and preliminary findings suggested the birds died of avian flu. Since May 2022, the Canadian Food Inspection Agency had confirmed 13 positive cases of the highly pathogenic avian influenza in the eastern Canadian province of Newfoundland. Environment and Climate Change Canada is conducting more investigations to confirm that the seabirds' deaths are linked to avian flu. Herring gulls, Iceland gulls, common ravens and American crows are among the species most affected by the virus. Avian influenza is highly contagious and can affect domestic and wild birds throughout the world. The Canadian Wildlife Service is working closely with the provincial government of Newfoundland and Labrador, as well as with the Canadian Wildlife Health Cooperative, to contain the spread. The disease has also spread rapidly in Vancouver Island, infecting great horned owls, bald eagles, great blue herons, ducks, geese and crows.

Source: Reuters (2022) [reuters.com/business/environment/thousands-dead-migrant-seabirds-wash-up-canada-shore-avian-flu-suspected-2022-07-28](https://www.reuters.com/business/environment/thousands-dead-migrant-seabirds-wash-up-canada-shore-avian-flu-suspected-2022-07-28)

Efforts to protect British Columbia's northern caribou

In southern and central British Columbia, caribou are struggling. Some herds have already been extirpated, their habitat eroded by logging and mining, crisscrossed by roads, or otherwise intruded upon by people. Other herds are just hanging on, their numbers dwindling, as Indigenous communities and scientists race to prevent any further losses. In northern British Columbia, caribou populations are comparatively in better shape, but a new assessment from the Wildlife Conservation Society Canada shows at least two herds are also declining as industrial expansion, wildfires and other pressures destroy their habitat. However, in the north, there are still large stretches of land unencumbered by industry, and there is still time to prevent caribou populations from reaching the crisis levels of their neighbours to the south. Protecting caribou from future declines will require improved monitoring of their populations and the impacts of human activity, and prioritizing conservation of the habitat they rely on.

Source: *The Narwhal* (2022) thenarwhal.ca/northern-mountain-caribou-conservation

Rare hummingbird rediscovered in Colombia

An experienced local birdwatcher in Colombia has rediscovered the extremely rare, Critically Endangered Santa Marta sabrewing *Campylopterus phainopeplus*, a relatively large hummingbird endemic to the Sierra Nevada de Santa Marta mountains. It is only the second documented sighting of the species since it was first collected in 1946. The last time was in 2010, when researchers captured the first-ever photos of the species in the wild. The Santa Marta sabrewing is so rare and elusive that it was included as one of the top 10 most wanted lost birds by the Search for Lost Birds. The male sighted in July 2022 was instantly recognizable by its emerald green feathers, bright iridescent blue throat and curved black bill. It was perched on a branch and singing, which scientists think is a behaviour associated with defending territory and courtship. However, no other hummingbirds were seen in the area, although there have been sporadic reports of Santa Marta sabrewing sightings during the past decade. Researchers believe the population in the Sierra Nevada de Santa Marta is very small and decreasing.

Source: *BirdLife International* (2022) birdlife.org/news/2022/08/05/rare-singing-emerald-green-and-iridescent-blue-hummingbird-unexpectedly-rediscovered-in-colombia

Monarch butterflies categorized as Endangered

A beloved visitor to summer gardens, the migratory monarch butterfly *Danaus plexippus*, has been categorized as Endangered on the IUCN Red List. The butterfly, known for its twice-yearly, 4,000-km journey across the American continent between its summer and winter grounds, has declined by 23–72% in the past 10 years. Although it has long been considered under threat, its listing on the IUCN Red List marks the first time it has been officially declared at risk of extinction. Monarchs are threatened by habitat destruction in their wintering grounds, which has caused steep declines in both the western and the eastern subpopulations. In their summer habitats, pesticides used in agriculture have killed monarchs and also milkweed, which the larvae feed on. Climate change, too, is an increasing threat as dramatic weather events such as hurricanes and drought become more common along the butterflies' southern migration routes.

Source: *National Geographic* (2022) nationalgeographic.com/animals/article/monarch-butterflies-are-now-an-endangered-species

Endangered Hawaiian monk seal population at its highest in 2 decades

Officials from the National Oceanic and Atmospheric Administration (NOAA) announced in May 2022 that the population of the Endangered Hawaiian monk seal *Monachus schauinslandi* is on the rise. Endemic to Hawaii, the monk seal population has been monitored for almost 4 decades, and increased from 1,435 to 1,570 individuals since the 2019–2020 survey, marking the first time the population has surpassed 1,500 in more than 20 years. Scientists at NOAA's Hawaiian Monk Seal Research Program said the count suggests conservation and rescue efforts are having an impact. They added that although the trend is promising, concerns remain about the species' long-term survival, as the low-lying islands and atolls the seals live on are threatened by rising sea levels associated with climate change, with some islands already having been washed away entirely. Additional threats are entanglement in fishing nets, ingestion of fishing hooks, and even deliberate killing by people, so conservation efforts remain vital to secure a future for the seals.

Source: *Los Angeles Times* (2022) [latimes.com/world-nation/story/2022-05-06/endangered-hawaiian-monk-seal-population-rises](https://www.latimes.com/world-nation/story/2022-05-06/endangered-hawaiian-monk-seal-population-rises)

Mysterious Arctic shark found cruising around Belize

A mysterious shark that is typically found in the waters of the Arctic was spotted cruising around a coral reef near Belize. Researchers were tagging tiger sharks as part of a long-term shark and ray monitoring project in the area when they discovered an unusual shark that none of the local fishers had ever seen before. After they consulted with experts, the researchers determined the individual belonged to the sleeper shark family. Named for their reportedly sluggish personalities, sleeper sharks are found mostly in polar and sub-polar areas. Because the sighted individual was so large, with a total length of c. 3.0–3.5 m, it was thought to probably be a Greenland shark *Somniosus microcephalus* or a hybrid of the Greenland shark and Pacific sleeper shark *Somniosus pacificus*. Greenland sharks usually prefer the icy cold waters of the Arctic and North Atlantic oceans. They are estimated to live 400 years or more, which makes them the longest-living vertebrate known to science.

Sources: *Marine Biology* (2022) doi.org/10.1007/s00227-022-04090-3 & *Treehugger* (2022) [treehugger.com/arctic-shark-found-cruising-around-belize-6500189](https://www.treehugger.com/arctic-shark-found-cruising-around-belize-6500189)

ASIA & OCEANIA

Wild tiger numbers 40% higher than thought

There are 40% more tigers in the wild than previously thought, with as many as 5,578 individuals, although the species remains Endangered, according to a leading conservationist group. The jump in numbers was a result of improved monitoring, with the population thought to be stable or increasing. Habitat protection projects showed that recovery is possible. There are thought to be between 3,726 and 5,578 wild tigers—40% more than at the last assessment in 2015. Although the tiger remained Endangered, the population trend indicates that projects such as the IUCN's integrated tiger habitat conservation programme are succeeding and recovery is possible as long as conservation efforts continue. Major threats include poaching of tigers themselves, poaching and hunting of their prey, and habitat destruction because of agriculture and human settlement. WWF also says that wild tiger numbers have started to recover after a century of decline in the main habitats of India, Nepal, Bhutan, Russia and China. The reassessment of tiger numbers came as the IUCN updated its Red List of Threatened Species.

Source: *The Guardian* (2022) [theguardian.com/environment/2022/jul/22/wild-tiger-numbers-40-higher-than-thought-says-conservation-group](https://www.theguardian.com/environment/2022/jul/22/wild-tiger-numbers-40-higher-than-thought-says-conservation-group)

Reserve welcomes birth of first Arabian oryx in 90 years

Saudi Arabia's King Salman Royal Reserve in the Northern Borders Region witnessed the birth of an Arabian oryx for the first time in 90 years. The birth is the result of cooperation between the King Salman Royal Reserve Development Authority and the National Center for Wildlife. A group of oryx was released in the Reserve in March 2022, as part of a reintroduction programme. The birth of the oryx calf gives a major boost to the preservation of the species, which disappeared from the region because of a combination of factors, including hunting and loss of vegetation cover. With adults weighing up to 80 kg, the Arabian or white oryx is the largest land mammal in the Arabian Peninsula. It is characterized by a white coat on most of the body except for the face and feet, which are usually a dark color.

Source: *The Levant* (2022) thelevantnews.com/en/article/saudi-arabia-welcomes-birth-of-first-arabian-oryx-in-kingdom-in-90-years-june-9,-2022,-7:56-am

World's biggest plant discovered off Australian coast

The largest known plant on Earth, a seagrass roughly three times the size of Manhattan, has been discovered off the coast of Australia. Using genetic testing, scientists have determined a large underwater meadow in Western Australia is in fact one plant. It is believed to have spread from a single seed over at least 4,500 years. The seagrass covers c. 200 km², researchers from the University of Western Australia said. The discovery was made at Shark Bay, c. 800 km north of Perth. Researchers had set out to understand the genetic diversity of the species, also known as ribbon weed, which is common along parts of Australia's coast. They collected shoots from across the bay and examined 18,000 genetic markers to create a fingerprint from each sample. They had aimed to discover how many plants made up the meadow and were astonished to find it was just one. The species generally grows like a lawn at a rate of up to 35 cm per year.

Sources: *Proceedings of the Royal Society B* (2022) doi.org/10.1098/rspb.2022.0538 & *BBC* (2022) [bbc.co.uk/news/world-australia-61655327](https://www.bbc.co.uk/news/world-australia-61655327)

Small efforts could have big effects for conservation of Australian animals

More than 40 Australian animals at the highest risk of extinction in the next 2 decades could be saved, and it would take only a small amount of extra conservation effort to achieve this, according to new research. A team of Australian scientists has identified the 63 vertebrates they believe are most likely to go extinct by 2041, and found at least 47 can be brought back from the brink. Although the data are alarming, they present an opportunity to invest in conservation improvements. The 47 species include 21 fish, 12 birds, six mammals, four frogs and four reptiles, with nine of those species estimated to have a greater than 50% risk of extinction in the next 20 years. Animals considered at high risk include the western ground parrot, the swift parrot and Victoria's Baw Baw frog. More than half of the habitat for those animals falls within conservation reserves and the habitat range for several was small, meaning targeted conservation efforts to address threats such as invasive species were possible.

Sources: *Biological Conservation* (2022) doi.org/10.1016/j.biocon.2022.109561 & *The Guardian* (2022) [theguardian.com/environment/2022/may/25/no-excuses-limited-conservation-efforts-could-save-at-least-47-australian-animals-from-extinction](https://www.theguardian.com/environment/2022/may/25/no-excuses-limited-conservation-efforts-could-save-at-least-47-australian-animals-from-extinction)

New Zealand funding push for the conservation of Pacific crop seeds

Farmers can now expect to get improved access to seeds and planting materials that will maintain and hopefully increase their yields despite the impacts of climate change, as the New Zealand Government has provided NZD 10 million for the conservation of Pacific crop seeds. The money will be allocated to the Fiji-based Centre for Pacific Crops and Trees, which since 1998 has been conserving the region's collections of 17 crops including yam, coconut and 70% of the world's taro varieties. Climate change is a major threat to Pacific agriculture, putting the region's food security at risk. This investment will increase resilience by ensuring the region's seeds and plant materials are preserved and protected for future generations.

Source: *Fiji Village* (2022) [fijivillage.com/news/NZ-gives-10-million-for-the-conservation-of-Pacific-crop-seeds-5fx48r](https://www.fijivillage.com/news/NZ-gives-10-million-for-the-conservation-of-Pacific-crop-seeds-5fx48r)

Pacific expedition may have discovered over 30 new deep-sea species

One of the world's least explored regions has revealed a collection of species unknown to science. Researchers collected samples from Areas of Particular Environmental Interest, on the abyssal plains of the Clarion-Clipperton Zone in the central Pacific, using a remotely operated vehicle. A total of 55 specimens were brought to the surface from across the abyssal plains and undersea hills known as seamounts, enabling scientists to examine the deep-sea organisms. There was evidence of 48 different species, of which only nine are currently known to science. The remaining 39 may be new species, but it is difficult to assess. There is too much uncertainty about the variation within known species to assign species with confidence, and older type specimens are often in poor condition, making comparisons with new samples difficult.

Sources: *ZooKeys* (2022) doi.org/10.3897/zookeys.1113.82172 & *The Natural History Museum* (2022) [nhm.ac.uk/discover/news/2022/july/pacific-expedition-may-have-discovered-over-30-new-deep-sea-species.html](https://www.nhm.ac.uk/discover/news/2022/july/pacific-expedition-may-have-discovered-over-30-new-deep-sea-species.html)

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 Annkathrin Sharp. Contributions from authoritative published sources (including websites) are always welcome. Please send contributions to oryx@fauna-flora.org.