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Searching for lost sharks

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assessed for the IUCN Red List of Threatened Species will be addressed with a new Marine Invertebrate Red List Authority, formed in December 2022.

Comprising > 170 Specialist Groups, Red List Authorities and Task Forces, the IUCN Species Survival Commission (SSC) currently has only three groups focused solely on assessment and conservation of marine invertebrates: horse-shoe crabs, corals and sea cucumbers. The SSC Marine Conservation Committee is currently preparing a proposal for a group focused on sea, brittle and feather stars. The remit of the Mollusc Specialist Group includes marine species, and although it has been assessing cephalopods, cone snails, abalone and some deep-sea species, it has mainly focused on terrestrial and freshwater species. All other marine invertebrates now have a home in the remit of the new Marine Invertebrate Red List Authority, which will work in collaboration with existing SSC groups and Centres for Species Survival to prioritize and assess taxa for the Red List, and develop additional specialist group capacity.

The geographical scope of the new Authority is global. Fisheries worldwide exert both direct and indirect pressure on marine invertebrate species and their habitats. There was a six-fold increase in landings and a doubling of the taxa reported in marine invertebrate fisheries from 1950 to 2010. Climate change, rising ocean temperatures and ocean acidification affect many marine invertebrates, particularly hard corals and species that grow or use shells and hard carapaces of calcium carbonate. Coastal development, infilling, dredging and deep-sea mining lead to direct mortality or habitat destruction. Offshore infrastructure and energy developments also affect invertebrates and their habitats. The impacts of such threats on the extinction risk of marine invertebrates are poorly known, particularly for less well-known taxa, such as those in the deep sea. Increasing public attention on the recent UN High Seas Treaty—which covers biodiversity in the vast areas of ocean beyond the jurisdiction of any country—and the threat of deep-sea mining, shows that assessment is urgently needed, to make a strong case to manage the deep sea appropriately for the protection of marine species.

The Marine Invertebrate Red List Authority will focus on the Red List assessment of marine invertebrate species, to shed light on threats and the level of extinction risk. This work is possible now because of generous funding for the Senckenberg Ocean Species Alliance, which will hire two full-time positions to work with the new Authority in 2023.

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Searching for lost sharks: extinct or alive?

The perception of sharks as large, fearsome, toothy predators belies the reality that sharks and rays are highly diverse and can be informative of the health of the marine environment. In 2014, nearly 25% of chondrichthyan species were threatened (Dulvy et al., 2014, *eLife*, 3, e00590), and this increased to c. 33% in 2021 (Dulvy et al., 2021, *Current Biology*, 31, 4773–4787), with at least three species possibly extinct.

IUCN Red List assessments show that overfishing and habitat loss and degradation are the primary drivers of this decline, with pollution and climate change also contributing. Yet despite increasing extinction risk, 20% of all known species of sharks, rays and ghost sharks (collectively referred to as sharks) were described in the past 15 years. Some known species, however, have simply vanished.

Most of the threatened sharks occur in subtropical and tropical coastal waters, in regions considered biodiversity hotspots but where there is a lack of adequate species-specific identification knowledge and identification guides. Thus although a few charismatic species receive much media, conservation and scientific attention, the fate of over 1,200 species of lost sharks (i.e. species that have not been recorded in over 10 years) remains largely unknown.

To address this problem, Moss Landing Marine Laboratories Pacific Shark Research Center's Lost Sharks project has partnered with an international team of regional and local experts in Africa, Asia, Europe, Indonesia and South America to search for shark species that have not been seen in decades. Through field surveys and identification training workshops, experts in each region will focus on a group of sharks, with an emphasis on Critically Endangered and possibly extinct species. To raise public awareness of these lost sharks, we will publicize our search through outreach, the media and speaking engagements. Information gathered through this project will be critical for our local partners in developing future conservation and management policies for sharks.

The 3-year Lost Sharks project runs from 2023 to 2025, and is supported by the Save Our Seas Foundation (grant 594) and South African Institute for Aquatic Biodiversity.

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EU Court of Justice rules that NGOs have the right to challenge forest management plans through the courts in Poland

On 2 March 2023, the Court of Justice of the EU ruled, in [Case C-432/21](#), that the exclusion in Polish legislation of the possibility of legal proceedings against forest management plans violates EU law. The Court stated that Poland was in breach of its obligations as a Member State of the EU because it had excluded in its legislation the possibility for environmental organizations to appeal against forest management plans. The Court concluded that conservation organizations must have the right to challenge forest management plans in court, especially if changes within forest ecosystems involve major human intrusion. The Court decided that species protection under the Bird and Habitat Directives of the EU takes precedence over local forest management.

In a joint communication, the Polish Ministry of Climate and Environment and the National Forests, which manages c. 80% of Poland's 9.2 million ha of forests, stated that the right to appeal forest management practices had already been respected. It was also stated that future court verdicts based on the EU Court of Justice decision would lead to the collapse of forest management throughout the country and consequently the collapse of the Polish timber industry.

The court decision will allow NGOs to at least partially control cutting in areas of natural value, especially in those areas where forest management blocks the founding or expansion of national parks. In recent years there has been systematic destruction of the most valuable forest areas in Poland, particularly in the Carpathian Forest. This forest, which covers the Bieszczady Mountains and

Przemysł Foothills in south-east Poland, is a refuge for species such as the brown bear, grey wolf, lynx, wildcat, golden eagle, Eurasian pygmy, eagle and Ural owls and the Eurasian three-toed woodpecker. NGOs have been campaigning for several decades for the enlargement of the Bieszczady National Park and the establishment of the Turnicki National Park in the Przemyskie Foothills.

This new ruling of the EU Court of Justice follows an [April 2018 verdict](#) by the Court concerning the Białowieża Primeval Forest, which highlighted failure of forest management in Poland to respect the Bird and Habitat Directives. It can only be hoped that the state authorities, as in the case of the verdict on the Białowieża Primeval Forest, will, after initial resistance, adhere to this latest ruling.

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TikTok facilitating songbird trade in Indonesia

Throughout Southeast Asia, songbirds are sought as pets, ornaments, for prayer releases, and particularly as competitors in singing competitions. In 2017, as a result of increased demand for wild-caught birds, the IUCN declared an Asian Songbird Extinction Crisis, with Indonesia a critical hotspot. The internet has provided new avenues for the exploitation, trafficking and sale of songbirds, including via the online marketplace OLX in Indonesia (Fink et al., 2021, *Applied Geography*, 134, 102505). The use of internet technology in the songbird trade is fast-moving and difficult for conservationists to address. Here we report evidence that TikTok (ByteDance, Beijing, China) is being used for advertising and facilitating trade in protected and threatened species of Indonesian birds.

Indonesia has c. 110 million TikTok users. In early 2021, TikTok joined the Coalition to End Wildlife Trafficking Online, releasing a guideline that 'any content that depicts or promotes the poaching or illegal trade of wildlife is not allowed on our platform and will be removed when identified', with 74% of this content allegedly removed before receiving any views (Koçak, 2021, *TikTok*, 16 June 2021). However, TikTok has been used to promote content from owners of exotic pets in the USA, some of which could be illegally sourced (Faheid, 2021, *National Public Radio*, 4 July 2021), and the UK TikTok site has been used to share images of illegal badger-killing trophies and organize attacks on badgers (Gatten, 2022, *The Telegraph*, 29 November 2022).