

Conservation news

New IUCN Species Survival Commission Marine Star Specialist Group

The IUCN Species Survival Commission (SSC) has a new Specialist Group, created in June 2023: the Marine Star Specialist Group, focusing on the asteroids (sea stars), ophiuroids (brittle stars), and crinoids (feather stars and sea lilies). The new Specialist Group will strengthen the SSC's vision—to prevent the loss and aid recovery of biodiversity—by increasing its focus on marine invertebrates. Marine stars are found from shallow- to deep-water marine habitats, including extreme environments such as seamounts, hydrothermal vents, cold seeps and anchialine caves.

Of almost 5,000 species, only the sunflower sea star *Pycnopodia helianthoides* has so far been assessed for the IUCN Red List, as Critically Endangered. It has also been proposed as threatened under the Endangered Species Act in the USA and is being assessed for listing with the Committee on the Status of Endangered Wildlife in Canada. This sea star is threatened by sea star wasting disease. This causes lesions, disintegration and death of the affected animals and has also been observed in more than 20 other sea star species along the west coast of North America and Antarctica; densities of the red sea star *Odontaster validus* recently dropped by 10% around Deception Island and by 50% to > 80% at two locations in McMurdo Sound, Antarctica.

None of these sea stars have had their Red List status assessed. Other sea star species have also undergone catastrophic population losses, including the unassessed Gulf sun star *Heliaster kubiniji*, which saw major declines in the late 1970s that were worsened by climate change. Sea stars can be highly endemic and therefore suffer from acute threats to their habitat. For example, the sea star *Marginaster littoralis* is listed in Australia as Critically Endangered and according to experts may even be extinct. Comparatively little is known about the conservation status of brittle stars, feather stars and sea lilies. For instance, 11 species of brittle stars and four species of sea stars have been found in anchialine caves, but none have been assessed for the IUCN Red List.

There is a clear need for marine star assessments, given the keystone role many of these species play in their respective ecosystems. The Marine Star Specialist Group will collaborate with the SSC's Marine Invertebrate Red List Authority and Sea Cucumber Specialist Group to train its members in Red List assessments and coordinate assessments of marine stars. The Group will also focus on conservation planning for marine stars and undertake and inspire actions to conserve these species in the face

of climate change, emerging marine infectious diseases, invasive species, habitat destruction through coastal development, runoff pollution, eutrophication, deep seabed mining and fishing activities. We need more experts to join us in this venture.

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Launching of the IUCN Species Survival Commission Indonesia Species Specialist Group

Global South leadership is key to achieving post-2020 conservation targets. To support this, we recently established the IUCN Species Survival Commission (SSC) Indonesia Species Specialist Group, conducting the first workshop on 15 June 2023, in Bogor, attended offline and online by the advisory group and founding members from across Indonesia. The new specialist group aims to coordinate nationwide expertise across taxonomic groups and disciplines to support the government and other stakeholders in efforts to reverse the decline of biodiversity through evidence-based decision-making and policy development. The group will be the nexus of diverse stakeholders to accommodate the growing number of Indonesian experts, including the new generation of conservationists; increase the representation of understudied taxonomic groups and regions; and advocate the use of science in decision-making, to establish the national Red List index as an indicator for the Indonesian Biodiversity Strategy and Action Plan and Post 2020 Global Biodiversity Framework.

The process of establishing the group began in 2019 by convening Indonesian members of several IUCN SSC Specialist Groups and representatives from the Society of Conservation Biology Indonesia to develop a concept note. This note was then discussed with the Ministry of Environment and Forestry and National Research and Innovation Agency, and revised accordingly to synergize the aim of the Specialist Group with the aspirations and conservation plans of the Indonesian government. We further aligned the programmes of the Specialist Group

with the IUCN Species Strategic Plan 2021–2025 to support the implementation of the Species Conservation Cycle (Assess–Plan–Act, Communicate and Network).

The initial membership of the Specialist Group comprises 87 Indonesian experts, mostly from western Indonesia and working on mammals, birds, reptiles, amphibians and plants. During the workshop, we identified key activities under the Species Conservation Cycle to be implemented by 2025: (1) Assess: to support comprehensive evaluation of biodiversity status by creating guidelines of the IUCN Red List assessment process in Bahasa Indonesia and arranging expert regional training to conduct assessments. (2) Plan: to prioritize and formulate action plans for Indonesian native, threatened and endemic species. (3) Act: to support and catalyse initiatives to conserve priority species by conducting training on species conservation planning and guiding the implementation of the plan. (4) Network: for the Specialist Group to be an effective and well-coordinated platform to facilitate collaboration among Indonesian experts and establish equitable partnerships with international experts. (5) Communicate: to arrange regular webinars and outreach activities to showcase the work of the members and to increase awareness among the public about Indonesian biodiversity. The Indonesia Species Specialist Group is hosted in the Center for Transdisciplinary and Sustainability Sciences, IPB University. We hope the establishment of this new Specialist Group may inspire similar initiatives across the Global South.

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Conservation status and priorities for Sulawesi's unique small mammal fauna

The Indonesian island of Sulawesi is a hotspot of small mammal endemism. It is home to 76 native species of rodents (Muridae and Sciuridae) and shrews (Soricidae), 73 of which occur nowhere else. The majority of these are threatened, Data Deficient or newly described and thus little studied. To address these knowledge gaps, the IUCN Species Survival Commission (SSC) Small Mammal Specialist Group hosted a 3-day Sulawesi Small Mammal Workshop in West Java in May 2023. It was funded by Re:wild and

an IUCN SSC Internal Grant, and attended by scientists and conservation practitioners familiar with Sulawesi's taxa, regions and communities.

The workshop first focused on updating Red List assessments for submission later this year. It is anticipated that c. 35 species will undergo a category change, including 18 that were previously categorized as Data Deficient. Many of these assessments relied on distribution data available from recent museum- and university-led surveys of unstudied mountains. Yet, most of Sulawesi's small mammals remain poorly known, with location, population and threat information largely lacking.

In line with the IUCN SSC's Assess–Plan–Act framework, participants also identified conservation and research needs. An important priority is to improve knowledge of the distribution and ecology of certain species, such as the Sulawesi water rat *Waiomys mamasae*, known to science from a single specimen (Rowe et al., 2014, *Zootaxa*, 3815, 541–546). Authors FF and MRTJPN are developing a project for this rodent.

Some species are imperiled by unquantified threats. For example, the two species of *Echiothrix* are thought to inhabit areas where the impacts of forest conversion for agriculture and expanding mining activities are undocumented and which are consequently a priority for study. Other key priorities include investigating hunting pressure on rodents, increasing area protection in collaboration with local communities, and raising awareness of, and nurturing pride in, the exceptional level of endemism and richness of Sulawesi's small mammals.

Overall, considerable gaps remain in small mammal research within globally significant hotspots such as Sulawesi. The various outputs of this workshop—including efforts to build capacity and support local researchers and conservationists—will bring a greater focus to the island's endemic shrews and rodents.



The endemic heavenly hill rat *Bunomys coelestis*, categorized as Endangered. Photo: Heru Handika.