Conservation News

IUCN Species Survival Commission Sponge Specialist Group

In June 2024, the IUCN Species Survival Commission (SSC) launched the new Sponge Specialist Group, which will focus on both marine and freshwater sponges and their habitats. Sponges (phylum Porifera) have shaped benthic ecosystems for > 600 million years and are widely distributed across marine, freshwater and transitional systems. In the marine realm in particular, sponges form highly structured habitats (sponge grounds, gardens, reefs and animal forests) that play key functional roles and deliver numerous ecosystem goods and services. They serve as habitat and nurseries for various species, including commercially exploited fish, and bath sponges have been harvested for centuries for their spongin skeleton, supporting the livelihoods of local communities. Sponges are also recognized as prolific sources of bioactive compounds with pharmacological potential and as biomimetic inspiration for tissue engineering, with promising applications for human health. However, sponges and their habitats are increasingly threatened by human activities (e.g. damage caused by fisheries, habitat degradation, climate change and deep-sea mining) in areas both within and beyond national jurisdictions (Xavier et al., 2023, *Frontiers in Marine Science*, 10, 1132451). There are currently c. 9,660 recognized species of sponges, in four classes, but actual diversity is estimated to be > 25,000 species. The majority are demosponges (Demospongiae, c. 8,010 species), followed by calcareous sponges (Calcarea, c. 820 species), glass sponges (Hexactinellida, c. 705 species) and Homoscleromorpha (c. 135 species). Although most species are marine, there are c. 190 species of freshwater demosponges (de Voogd et al., 2024, *World Porifera Database*, marinespecies.org/porifera).

The new Specialist Group will bring together scientists and conservation practitioners to protect sponge biodiversity and the ecosystem services they provide, and will collaborate with the IUCN SSC Marine and Freshwater Conservation Committees and the IUCN SSC Marine Invertebrates Red List Authority network. It will liaise with several key SSC groups, particularly those focusing on other habitat-forming taxa (e.g. corals, seaweeds, seagrasses and mangroves), to exchange knowledge, coordinate efforts and enhance conservation impact. The group is also closely linked with SponBIODIV (sponbiodiv.org), a project that delivers knowledge and tools for the sustainable management and conservation of marine sponge diversity, funded by Biodiversa+, the European Biodiversity Partnership under the 2021–2022 BiodivProtect joint call for research proposals, co-funded by the European Commission (GA No. 101052342). Follow us as we advance sponge conservation from local initiatives to a global movement.

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