



Species

ISSUE 63

2022 Report of the IUCN Species Survival Commission and Secretariat



The IUCN Species Survival Commission (SSC)

The IUCN Species Survival Commission (SSC) is a science-based network of thousands of volunteer experts from almost every country of the world, all working together toward achieving the vision of “a just world that values and conserves nature through positive action to both prevent the loss and aid recovery of the diversity of life on earth.”

Members of SSC belong to one or more of near 200 Specialist Groups, Red List Authorities, Action Partnerships, Task Forces, and Conservation Committees that make up the Network, each focusing on a taxonomic group (plants, fungi, mammals, birds, reptiles, amphibians, fishes, and invertebrates), national species, or a disciplinary issue, such as sustainable use and livelihoods, translocation of species, wildlife health, climate change, and conservation planning.

Framed by the Species Conservation Cycle, SSC’s major role is to provide information to IUCN on biodiversity conservation, the inherent value of species, their role in ecosystem health and functioning, the provision of ecosystem services, and their support to human livelihoods. This information is fed into the IUCN Red List of Threatened Species.

2021-2025 Species Strategic Plan

The IUCN Species Strategic Plan encompasses the joint work of the IUCN Species Survival Commission and a number of partnerships to achieve more than 2,700 targets proposed by the Network during the 2021-2025 quadrennium.

To accomplish those targets, the Species Conservation Cycle was established, which is the conceptual framework for the Network activities. The Species Conservation Cycle’s main purpose is to guide efforts for valuing and conserving biodiversity through three essential components that are linked to each other:

ASSESS: Understand and inform the world about the status and trends of biodiversity.

PLAN: Develop collaborative, inclusive and science-based conservation strategies, plans and policies.

ACT: Convene and mobilise conservation actions to improve the status of biodiversity.



Their implementation requires two transversal components:

NETWORK: Enhance and support our immediate network and alliances to achieve our biodiversity targets.

COMMUNICATE: Drive strategic and targeted communications to enhance our conservation impact.

SSC Species Report

Annual progress in the implementation of the 2021-2025 Species Strategic Plan is documented in the SSC *Species Report*, which consists of a comprehensive description and analysis of the activities and results generated by the members of the SSC Network each year. Each SSC Group contributes to this document by providing a yearly summarised description of their achievements, which is presented in stand-alone reports.

Structure of the IUCN SSC Stand-alone Report

Stand-alone reports summarize the activities conducted and results generated by each group member of the SSC. Following, is the structure of the stand-alone report and the contents under each session.

Title of the SSC Group

Photograph(s) of the Chair / Co-Chairs

Group information

Includes names of Chair / Co-Chairs, Vice-Chairs, Deputy Chairs, Red List Authority Coordinators and Program Officers, their institutional affiliations, number of members and social networks currently active.

Logo of the SSC Group

Mission statement

Includes the mission of the group.

Projected impact for the 2021-2025 quadrennium

Includes the description of the impact on species conservation resulting from the implementation of the targets formulated by the group for the 2021-2025 quadrennium.

Targets for the 2021-2025 quadrennium

Includes the targets planned by the SSC Group for the 2021-2025 quadrennium ordered alphabetically by component of the Species Conservation Cycle. Each target is labeled with a numerical code (e.g., T-001, T-012) that identifies it in the SSC DATA database and its status for the reported year is indicated (Not initiated, On track or Achieved).

Activities and results

Includes the targets for which activities were conducted and results were generated during the reported year, ordered alphabetically, first by component of the Species Conservation Cycle, and second by Activity Category. Description of activities and results includes the indicator that best describes progress, its associated quantitative or qualitative result, and the narrative description of the activity conducted or result obtained. Each activity or result reported is linked to the Key Species Result to which it is mainly associated (e.g., KSR#1, KSR#5).

Acknowledgements

Includes the acknowledgements to funding agencies, partners, and persons who contributed to the progress of the targets of the group.

Summary of achievements

Summarises information of the group's strategic plan for the quadrennium and progress achieved implementing targets for all the components of the Species Conservation Cycle during the reported year.

Example for the recommended citation:

Cumberlidge, N, and Crandall, K. 2023. 2022 Report of the Freshwater Crustacean Specialist Group. In: Nassar, JM, García, L, Mendoza, L, Andrade, ND, Bezeng, S, Birkhoff, J, Bohm, M, Canteiro, C, Geschke, J, Henriques, S, Ivande, S, Mileham, K, Ramos, M, Rodríguez, A, Rodríguez, JP, Street, B, and Yerena, E (Eds.). 2022 Report of the IUCN Species Survival Commission and Secretariat. International Union for Conservation of Nature. 6 pp.

Animalia

Fungi

Plantae

National Species

Disciplinary

Action Partnership

Task Force

Red List Authority

Committee

Center for Species Survival

IUCN SSC Freshwater Crustacean Specialist Group



CO-CHAIR

Neil Cumberlidge

Northern Michigan University, Marquette, Michigan, US

CO-CHAIR

Keith Crandall

George Washington University, Washington, DC, US

RED LIST AUTHORITY

COORDINATORS

Darren Yeo

Department of Biological Sciences, National University of Singapore, Singapore

Keith Crandall

George Washington University, Washington, DC, US

Sammy De Grave

Oxford University Museum of Natural History, Oxford, UK

NUMBER OF MEMBERS

25

Mission statement

The mission of the IUCN SSC Freshwater Crustacean Specialist Group (FCSG) is to work towards all aspects of the long-term conservation of freshwater decapods (freshwater crabs, crayfish, freshwater shrimps and aeglids) worldwide. Specific goals are: 1) to act as the Red List Authority and to update IUCN Red List species assessments; 2) to promote their long-term conservation worldwide by management of habitats and by the development of conservation strategies and, where necessary, the recovery of populations; 3) to promote integrated research on biodiversity and conservation; 4) to educate non-specialists about all aspects of the group, and 5) to create and maintain an FCSG website that will provide up-to-date world species lists, keep track of the discovery of new species, and list the Red List status for each species.

Projected impact 2021–2025

By the end of 2025, we hope to have completed updates across the freshwater crabs, crayfishes, and shrimps, including the addition of newly described species, updates in taxonomy, and reassessments of those species in need based on lacking an initial assessment and/or new data relevant to assessments. We will identify key species in each of these three main freshwater crustacean groups (crabs, crayfishes, and shrimps) to highlight as in need of conservation priority and target conservation efforts and plan development as part of our Specialist Group. Like many invertebrate groups, the first and fundamental impediment to conservation of freshwater crustaceans is simply documenting the species and having an assessment. Thus, our focus for the next quadrennium will be also to link efforts with related IUCN Specialist Groups, especially the Cave Invertebrate, South Asian Invertebrate, Terrestrial and Freshwater Invertebrate organismal groups as well as many of the

relevant cross-cutting groups such as Asian Species Action Partnership, Climate Change Specialist Group, Biodiversity and Protected Area Task Force, Conservation Genetics Specialist Group, Conservation Planning Specialist Group and Phylogenetic Diversity Task Force.

Targets 2021–2025

ASSESS

T-002 Update Red List status of *Euastacus* based on reassessments.

Status: Not initiated

T-007 Update crayfish taxonomy with Red List assessments where applicable.

Status: On track

T-009 Update North American Crayfish Red List.

Status: Not initiated

T-012 Update South American Crayfish Red List.

Status: Not initiated

Procambarus orcinus from Florida caves
Photo: Nelson & Crandall



T-013 Conduct Red List assessments for *Aegla* species (family Aegliidae).
Status: On track

T-015 Update freshwater crab taxonomy with Red List assessments where applicable.
Status: On track

T-016 Complete a global Red List reassessment of the freshwater crabs.
Status: Not initiated

T-018 Conduct the Socotra Freshwater Crab red listing.
Status: On track

PLAN

T-006 Plan reassessment meetings for the coming years: 1) crabs, 2) shrimp, 3) crayfish.
Status: On track

T-008 Develop concepts for Marine Crustacean Specialist Group(s).
Status: On track

NETWORK

T-005 Increase membership in FCSG.
Status: On track

T-017 Training opportunities and linking with other relevant SSC groups.
Status: Achieved

COMMUNICATE

T-003 Develop multiple communication channels for the FCSG.
Status: Not initiated

T-014 Support Freshwater Conservation Committee communications highlighting freshwater species at risk and threats to freshwater systems.
Status: Achieved

T-019 Develop the FCSG Report 2021.
Status: Achieved

T-020 Develop the FCSF Report 2022.
Status: On track

Activities and results 2022

ASSESS Red List

T-007 Update crayfish taxonomy with Red List assessments where applicable. (KSR 6)

Number of new global Red List assessments completed: 1

Result description: We have had a few meetings on how to get the Red List taxonomy updated but still need to implement the updates.

T-013 Conduct Red List assessments for *Aegla* species (family Aegliidae). (KSR 6)

Number of new global Red List assessments completed: 0

Result description: We met on January 27, 2022, to review the plan for Red List updates for Aegliidae. Since then, the Global Center has drafted the text portion for 80 species in SIS and started to produce draft maps to share with Aeglid experts.

T-018 Conduct the Socotra Freshwater Crab red listing. (KSR 6)

Number of national Red List reassessments published: 0

Result description: Freshwater Conservation Committee member Dr Kay van Damme initiated a project in 2022 to assess at least two species of freshwater crab from Socotra. In 2023, he will carry out fieldwork to obtain new data informing these assessments.

Research activities

T-015 Update freshwater crab taxonomy with Red List assessments where applicable. (KSR 5)

Updated freshwater crab taxonomy in place to support subsequent (re-)assessments of these species: Ongoing.

Result description: Freshwater crab taxonomy has been partly updated in IUCN's Species Information Service but there are still 359 new species described more recently that need to be assessed for the first time. For example, there are 1,309 species of freshwater crabs currently on the Red List. There are now 1,667 species of freshwater crabs that have been described globally as of December 2022.

PLAN Planning

T-008 Develop concepts for Marine Crustacean Specialist Group(s). (KSR 8)

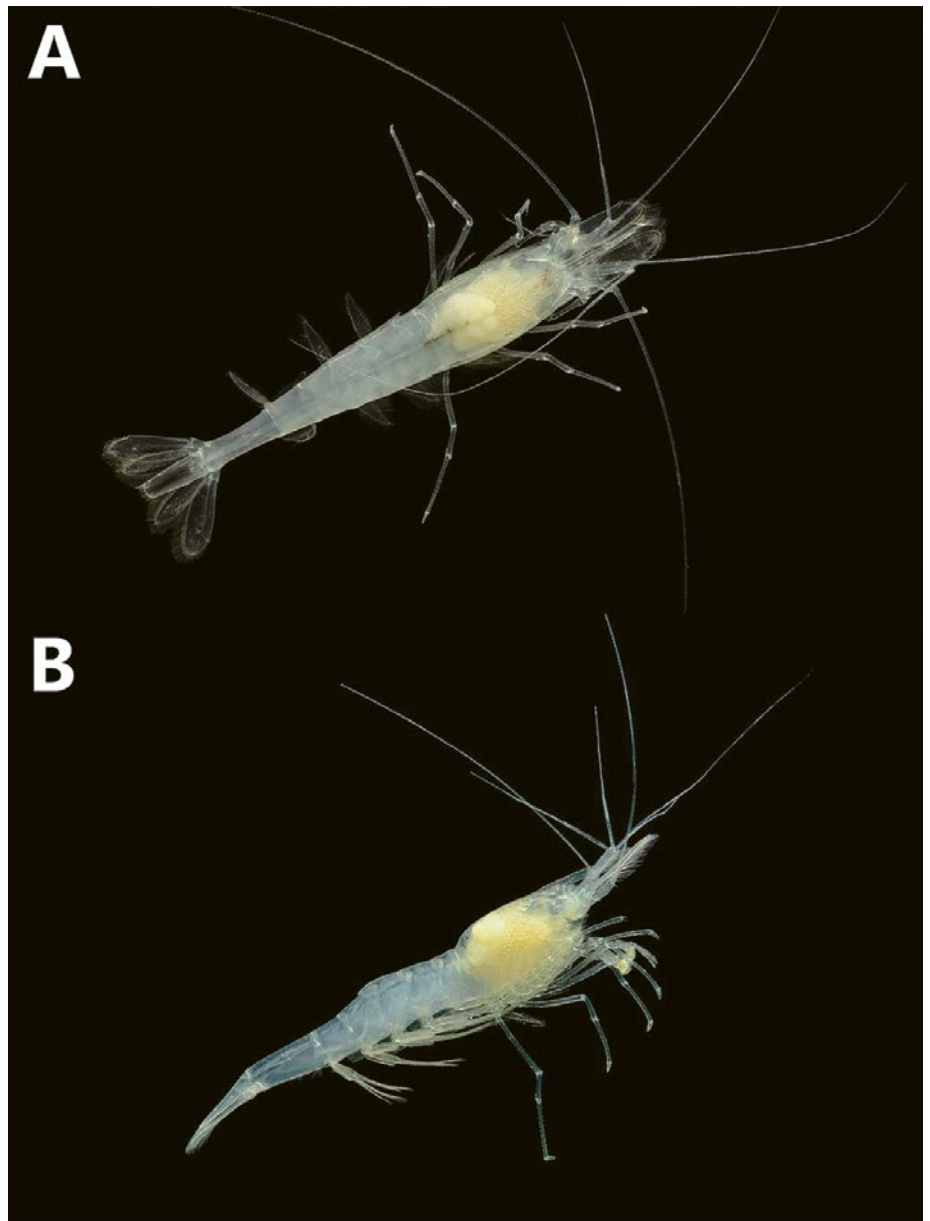
Number of conservation plans/strategies developed: 1

Result description: We meet with decapod marine taxonomic specialists to develop DecaNet — a world list of decapod crustaceans. This meeting took place in Oostende, Belgium and was hosted and funded by LifeWatch. The meeting took place on May 10-13, 2022, and we had a dedicated session on IUCN red listing, especially on marine decapods. The meeting was hosted by the Flanders Marine Institute, organized by Sammy DeGrave,

White-clawed Crayfish (*Austropotamobius pallipes*)
Photo: David Gerke (CC BY-SA 3.0)



Photographs of the Alabama Cave Shrimp
(*Palaemonias alabamae*) Fern Cave, Jackson County,
Alabama in life: dorsal (A) and lateral views (B)
Photo: Niemiller ML, et al. (2019). 'Discovery of
a new population of the federally endangered
Alabama Cave Shrimp, *Palaemonias alabamae*
Smalley, 1961, in northern Alabama'.
Subterranean Biology 32: 43-59. (CC0)



and attended by Keith Crandall. On June 6, 2022, Crandall attended a meeting 'Discussion re: formation of an IUCN SSC Marine Crab, Lobster, and Shrimp specialist group' to discuss a specialist group around decapod crustaceans. This meeting was hosted by Riley Pollom from IUCN. In December of 2022, the Co-Chair Keith Crandall attended the All-Invertebrates Meeting; and led the introduction to Julia Sigwart and efforts to establish a Marine Invertebrate Red List Assessment (MIRLA group). As well, Crandall has registered with the MIRLA listserv and will attend a meeting in January of 2023 to discuss future directions.

Policy

T-006 Plan reassessment meetings for the coming years: 1) crabs, 2) shrimp, 3) crayfish. (KSR 9)

Number of documents provided to support/guide policy-making: 1

Result description: Initiated discussions with Catherine Sayer regarding updating Red List assessments for crabs, crayfish, and shrimps.

NETWORK

Capacity building

T-017 Training opportunities and linking with other relevant SSC groups. (KSR 3)

Number of training sessions: 6

Result description: In 2022, we delivered six training sessions: 1) SSC Fisheries Task Force; 2) Aeglid Red List Assessment Meeting; 3) National Red Listing Meeting; 4) IUCN Systems Discussion Meeting; 5) IUCN SSC Freshwater Meeting, and 6) All Invertebrates Meeting.

Membership

T-005 Increase membership in FCSG. (KSR 2)

Number of SSC members recruited: 14

Result description: We now have 14 official members of the FCWG. We plan to expand this membership but need some IUCN help in figuring out how to get new members co-opted.

COMMUNICATE

Communication

T-014 Support Freshwater Conservation Committee communications highlighting freshwater species at risk and threats to freshwater systems. (KSR 12)

Contribute to and disseminate communications from Freshwater Conservation Committee's Species at risk report (in partnership with Shoal) within and outside SSC: Ongoing.

Result description: The FCSG supported the production of the Freshwater Conservation Committee and Shoal's 'Fantastic Freshwater' report, by reviewing species information for the five species that were included in the report: Alabama Cave Shrimp (*Palaemonias alabamae*), Mallacoota Burrowing Crayfish (*Engaeus mallacoota*), Singapore Freshwater Crab (*Johora singaporensis*), White-clawed Crayfish (*Austropotamobius pallipes*) and Tree Hole Crab (*Globonantes macropus*). The report was published in May 2022: <https://shoalconservation.org/fantastic-freshwater-report-released/>. The Co-Chair Crandall attended the 'National red listing and its links to the Post-2020 Global Biodiversity Framework' meeting on June 1, 2022, and hosted by the IUCN central office to discuss the importance of

conducting national Red List assessments, outline how national Red List assessments support the development of policies to conserve species and also lead to multiple conservation interventions.

T-019 Develop the FCSG Report 2021. (KSR 13)

Number of print communications materials distributed in relation to specific taxonomic groups: 1

Result description: The IUCN SSC Freshwater Crustacean SG Report for 2021 was completed in August of 2022 to be included in the 2021 Species Report of the SSC and GSP.

Summary of achievements

Total number of targets 2021–2025: 16

Geographic regions: 11 Global, 3 America, 1 Asia, 1 Oceania

Actions during 2022:

Assess: 4 (KSR 5, 6)

Plan: 2 (KSR 8, 9)

Network: 2 (KSR 2, 3)

Communicate: 2 (KSR 12, 13)

Overall achievement 2021–2025:

