



# Species

ISSUE 64

## 2023 Report of the IUCN Species Survival Commission and Secretariat



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## 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.

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### 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.

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### 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 and Centers for Species Survival (CSS) each year. Each SSC and CSS group contributes to this document by providing a yearly summarised description of their achievements, which is presented in stand-alone reports.

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## Structure of the IUCN SSC and CSS Stand-alone Reports

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

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### Title of the group

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### Photograph(s) of the Chair/Co-Chairs

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### Group information

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

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### Logo of the group

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### Mission statement

Includes the mission of the group.

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### 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.

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### Targets for the 2021-2025 quadrennium

Includes the targets planned by the SSC or CSS 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).

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### 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).

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### Acknowledgements

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

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### 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.

Animalia

Fungi

Plantae

National Species

Disciplinary

Action Partnership

Task Force

Red List Authority

Committee

Center for Species Survival

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### Example for the recommended citation:

George, S.B. 2024. 2023 Report of the Marine Star Specialist Group. In: IUCN SSC and Secretariat. *2023 Report of the IUCN Species Survival Commission and Secretariat*. Gland, Switzerland: IUCN. 4 pp.

## 2023 Report

# IUCN SSC Marine Star Specialist Group



**CHAIR**  
**Sophie B. George**  
Biology Department,  
Georgia Southern  
University; Friday  
Harbor Laboratories,  
University of  
Washington; Seattle,  
WA, US

**NUMBER OF MEMBERS**  
16

### Mission statement

The Species Survival Commission (SSC) Marine Star Specialist Group focuses on the conservation of the world's asteroids (sea stars), ophiuroids (brittle stars), and crinoids (feather stars and sea lilies). Its goal is to 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. Despite the almost 5,000 species described, very little is known about the conservation status of marine stars – as of the end of 2023, only one species, the Sunflower Sea Star (*Pycnopodia helianthoides*) had been assessed for the IUCN Red List of Threatened Species. Climate change, disease, coastal development, pollution, invasive species, and habitat destruction from activities such as deep-sea mining and fisheries are likely to impact marine stars across the globe. The main mission of the Marine Star Specialist Group is to: (a) Provide information to the IUCN on the diversity of asteroids, ophiuroids, and crinoids; (b) Determine their role in

maintaining ecosystem biodiversity and function; (c) Identify threats from climate change, disease, coastal development, pollution, invasive species and habitat destruction including deep sea mining and fishing activities; (d) Focus on conservation planning for marine stars.

### Projected impact 2021–2025

The Marine Star Specialist Group work will lead to: (1) increased awareness of marine star status through assessment and outreach; (2) increased action to tackle primary threats to these species, and (3) increased capacity for species assessment and conservation planning within the Specialist Group.

### Targets 2021–2025

#### ASSESS

**T-001** Complete assessment of 10 species of Marine Star.  
Status: On track

**T-009** Produce a global review of threats/pressures on Marine Stars (e.g. overexploitation, disease, and habitat degradation).  
Status: Not initiated

#### NETWORK

**T-003** Recruit at least 35 members by 2025.  
Status: On track

**T-004** Encourage all members to take the online Red List course (module 3) and several trains to become global and regional assessors.  
Status: Not initiated

**T-006** Conduct regular Specialist Group meetings to discuss pertinent Specialist Group and marine star business.  
Status: On track

**T-007** Create regional, taxonomic, or thematic (threat-based) working groups within the Specialist Group, as necessary.  
Status: On track

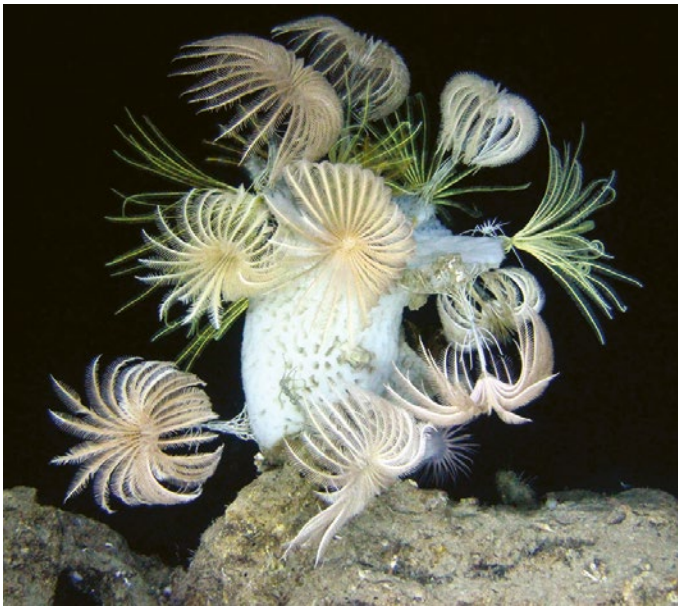
**T-008** Identify and appoint a Red List Authority Coordinator and Co-Chair.  
Status: Not initiated

#### COMMUNICATE

**T-002** Attend several conferences to communicate the creation of the Marine Star Specialist Group.  
Status: On track

**T-005** Publish several articles to highlight the creation and work of the Marine Star Working Group.  
Status: On track





Crinoids- Feather stars and sea lilies coexist  
Photo: Meg Veitch



*Pycnopodia helianthoides*  
Photo: Bennett Whitnell

**T-010** Create a website for SG and logo.  
Status: On track

## Activities and results 2023

### ASSESS

#### Red List

**T-001 Complete assessment of 10 species of Marine Star.** (KSR 6)

Number of new global Red List assessments completed: 0

Result description: In our regular Marine Star Specialist Group meetings and via email correspondence, we discussed potential species for assessment. Assessments will commence in 2024.

### NETWORK

#### Capacity building

**T-004 Encourage all members to take the online Red List course (module 3) and several trainings to become global and regional assessors.** (KSR 2)

Number of people trained in assessment tools: 12

Result description: In 2023, 12 members completed the online IUCN Red List Training course, of which seven are now regional or global assessors for Marine Star species.

#### Membership

**T-003 Recruit at least 35 members by 2025.** (KSR 2)

Number of SSC members recruited: 15

Result description: By the end of 2023, 15 members were officially signed up as Marine Star Specialist Group members, representing 11 countries. Overall, the unofficial list is somewhat larger but not all have been officially signed up yet.

**T-006 Conduct regular Specialist Group meetings to discuss pertinent Specialist Group and marine star business.** (KSR 2)

Number of Specialist Group meetings held: 2

Result description: We held two virtual Specialist Group meetings in 2023, attended by 13 participants from nine countries (July 2023) and 24 participants from 13 countries (September 2023), respectively.

Hold an in-person SG meeting at the International Echinoderm Conference: 0

Result description: We are planning to organise an in-person meeting at the 17<sup>th</sup> International Echinoderm Conference in Tenerife in July 2024.

**T-007 Create regional, taxonomic, or thematic (threat-based) working groups within the Specialist Group, as necessary.** (KSR 2)

Number of working groups established: 0

Result description: We started the process of creating several working groups in 2023, including an Asteroid working group, a red listing working group, and a taxonomy working group. These will be formalised in 2024. We also engaged with existing working groups covering marine star issues, such as the Pycnopodia Recovery Working Group and the AZA SAFE Sunflower Sea Star program.

### COMMUNICATE

#### Communication

**T-002 Attend several conferences to communicate the creation of the Marine Star Specialist Group.** (KSR 13)

Number of SSC members' presentations developed in relation to specific taxonomic groups: 0

Result description: We submitted an abstract, which was accepted, to present a poster about the new group and its work focus at the Society for Integrative and Comparative Biology Conference, which will be held in Seattle, Washington, January 2-6, 2024.

**T-005 Publish several articles to highlight the creation and work of the Marine Star Working Group.** (KSR 13)

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

Result description: We published a news article in *Oryx* to highlight the establishment of the Marine Star Specialist Group and report on its work focus: George, S.B., Böhm, M., Vincent, A.C.J. (2023). 'New IUCN Species Survival Commission Marine Star Specialist Group'. *Oryx*, 57(6), 689–700.

**T-010 Create a website for SG and logo.** (KSR 12)

Logo and website created: Ongoing.

Result description: We created our logo, but the website development has not yet been initiated (although the next steps were discussed at Specialist Group meetings).

### Acknowledgements

We would like to thank our members for their enthusiasm for this new Specialist Group. We are grateful for continuing support from the Global Center for Species Survival at the Indianapolis Zoo.

### Summary of achievements

Total number of targets 2021–2025: 10

Geographic regions: 10 Global

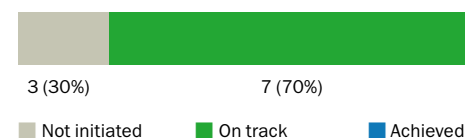
Actions during 2023:

Assess: 1 (KSR 6)

Network: 5 (KSR 2)

Communicate: 3 (KSR 12, 13)

Overall achievement 2021–2025:





*Nothobranchius fuscotaeniatus*  
Photo: Csenge Nagy



*Tetra Parnaiba*  
Photo: Karina Molina



*Trioceros hoehnelii*  
Photo: Christopher V. Anderson



*Sternberia lutea*  
Photo: Hayri Duman



*Egretta rufescens*  
Photo: Ernesto Gómez



*Lactifluus neotropicus*  
Photo: Aida Vasco



Mayfly nymph (*Ecdyonurus* sp.)  
Photo: Astrid Schmidt-Kloiber and Wolfram Graf