IUCN SSC Species Survival Commission

Species

ISSUE 64

2023 Report of the IUCN Species Survival Commission and Secretariat

Stand-alone report
IUCN SSC Cave Invertebrate Specialist Group

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 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 standalone reports.

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.

Title of the group

Photograph(s) of the Chair/Co-Chairs

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

Logo of the 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 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).

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.

Animalia

Fungi

Plantae

National Species

Disciplinary

Action Partnership

Task Force

Red List Authority

Committee

Center for Species Survival

Example for the recommended citation:
Deharveng, L. 2024. 2023 Report of the Cave Invertebrate Specialist Group. In: IUCN SSC and Secretariat. *2023 Report of the IUCN Species Survival Commission and Secretariat.* Gland, Switzerland: IUCN. 6 pp.

2023 Report

IUCN SSC Cave Invertebrate Specialist Group

SOCIAL MEDIA AND WEBSITE
Website: https://caveinvertebrates.org/

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NUMBER OF MEMBERS
44

Mission statement

The Cave Invertebrate Specialist Group (CISG) is a global network of experts working on organisms associated with karst and caves. Our goals are to contribute to increasing knowledge of these animals and plants, which are extremely rich in narrow endemics, and to promote conservation action through red listing, mostly focused on species under threats, such as limestone quarrying or water pollution.

Projected impact 2021–2025

Our activity will be progressively and significantly redirected towards more conservation-relevant species and sites, rather than towards multiple red listing of species not associated with clear conservation issues. We delivered a communication on this re-orientation at the Biospeleological Society Congress, held in Romania in July 2022. In parallel, we are discussing special features of subterranean animal assessments, as they strongly differ from surface species in many important respects; we hope that this will impact positively the way they are assessed in the near future. We also expect it will have a real impact on conservation efficiency by targeting as a priority the species most at risk on critical sites.

Targets 2021–2025

ASSESS

T-001 Upgrade the Brazilian cave species from national to global IUCN Red List assessments.
Status: Not initiated

T-002 Complete global Red List assessment of 20 cave species from Maros Karst, South Sulawesi, Indonesia.
Status: On track

T-003 Complete global Red List assessment of several cave species from Georgia.
Status: On track

T-004 Complete global Red List assessment of Remipedia.
Status: Not initiated

T-005 Complete global Red List assessment of a cave species from Hon Chong Karst, Viet Nam.
Status: Achieved

T-010 Revise the global Red List assessments for the Dinaric Cave Clam (*Congeria kusceri),* which is now three species.
Status: On track

T-016 Complete assessments of stygobitic invertebrates of Somalia.
Status: On track

NETWORK

T-011 Participate in designating the 'Tony Whitten Conservation Prize' fund for grants on cave biodiversity of Southeast Asia.
Status: Achieved

COMMUNICATE

T-006 Develop CISG website.
Status: Achieved

T-007 Participate at the 21st International Conference on Subterranean Biology, Romania, 2022 (still waiting on confirmation that it will be held).
Status: Achieved

T-008 Co-organise symposium session on Biospeleology at the 18th International Congress of Speleology in Lyon, France, 2022.
Status: Achieved

T-009 Set up a network of regional contact persons for identifying and dealing with regional issues.
Status: On track

T-014 Publish data on hot spots of cave invertebrates, including evaluation of threats.
Status: Achieved

T-015 Address relevant communication requests from media platforms.
Status: Achieved

Activities and results 2023

ASSESS

Red List

T-003 Complete global Red List assessment of several cave species from Georgia. (KSR 6)

Number of new global Red List assessments completed: 0

Hanging roots in Hang Mo So cave, Viet Nam,
a rich habitat for cave fauna
Photo: Louis Deharveng

Result description: Species assessments are in process. A list of species to be assessed and most outlines of assessment for them are available. We are waiting for the closure of the 2023 Internal Grant in May 2024 to finalise the assessment.

[SSC Grant awarded]

T-010 Revise the global Red List assessments for the Dinaric Cave Clam (*C. kusceri*), which is now three species. (KSR 6)

Number of global Red List reassessments completed: 0

Result description: The revision of the global status of the Dinaric Cave Clam species cluster was hindered by taxonomic and nomenclatural issues, which have finally been addressed and resolved in 2023. The target of revision of the Red List assessment for the *Congeria* species is planned for 2024. Description of the problem from the paper abstract: Two extant cave-dwelling bivalves of the dreissenid genus *Congeria* were recently described by Morton et Bilandžija in Bilandžija *et al*. (2013) as *Congeria jalzici* Morton et Bilandžija and *C. mulaomerovici* Morton et Bilandžija. Unfortunately, the volume of the *Frontiers in Zoology* in which the descriptions were published was online-only and did not include a Zoobank registration number (LSID), which is required for validation of new names in electronic-only publications (ICZN, 2012). In consequence, the names

Cave shrimp *Troglocaris* cf. kapelana
in Markov Ponor
Photo: Jana Bedek

Cyhophthalmus sp. nov in Lukina Jama,
Trojama Cave System
Photo: Jana Bedek

Croatobranchus mestrovi in Slovačka Jama
Photo: Jana Bedek

Geophilus hadesi in LukinaJama,
Trojama Cave System
Photo: Jana Bedek

Hadzinia sp. in cave on Velebit Mountain
Photo: Jana Bedek

First flying troglobite *Troglocladius hajdi* in Lukina Jama, Trojama Cave System
Photo: Jana Bedek

Zospeum tholussum in Lukina Jama, Trojama Cave System
Photo: Jana Bedek

C. jalzici and *C. mulaomerovici* should not be available according to the International Code of Zoological Nomenclature (ICZN 1999, 2012). Therefore, the present note serves to validate the names *C. jalzici* and *C. mulaomerovici* by fulfilling the ICZN conditions for nomenclatural availability. Reference: Morton, B. and Bilandžija, H. (2023). 'Nomenclatural validation of two extant *Congeria* species, *C. jalzici* and *C. mulaomerovici* (Bivalvia: Dreissenidae) from the caves of the Dinaric karst'. *Nat. Croat.*, Vol. 32, No. 2, 439-444, Zagreb.

T-016 Complete assessments of stygobitic invertebrates of Somalia. (KSR 6)

Number of new global Red List assessments completed: 0

Result description: The assessments of five stygobiotic invertebrates from Somalia's wells have been created in SIS and are currently under internal review. The assessments are expected to be finished before the end of 2024.

Research activities

T-002 Complete global Red List assessment of 20 cave species from Maros Karst, South Sulawesi, Indonesia. (KSR 5)

Number of research projects completed or supported by SSC members per taxonomic group and region: 0

Result description: The work well advanced in 2021 has not been completed in 2022 and 2023, waiting for the publication of the second and final volume of the journal *Diversity* (MDPI) which is planned for the beginning of 2024, and will provide a synthesis of the major hotspots of subterranean biodiversity on earth.

COMMUNICATE

Communication

T-006 Develop CISG website. (KSR 12)

Number of websites developed: 1

Result description: The website was developed and launched, providing group info along with a reference library, which will be added on to over time.

T-009 Set up a network of regional contact persons for identifying and dealing with regional issues. (KSR 13)

Regional focal persons are identified and manage issues regarding their region: Ongoing.

Result description: Through the edition of the special issue of the journal *Diversity* about 'World Hotspots of Subterranean Biodiversity' and the ongoing edition of the *Encyclopaedia Biospeologica - Europe* (60 contributions, more than 200 contributors), contacts with a large number of subterranean specialists have been formalised. Several expressed interest in subterranean species conservation in different regions of the world. The publication at the beginning of 2024 of the second Special Issue would allow us to go further in allocating and sharing tasks.

T-014 Publish data on hot spots of cave invertebrates, including evaluation of threats. (KSR 12)

Number of books, handbooks and guides published: 1

Result description: Open-source publication titled 'Hotspots of Subterranean Biodiversity-2nd volume' has been published. It is a complement to the 'Hotspots of Subterranean Biodiversity-I' that we published in 2021. It includes 15 papers focusing on 12 hotspots of different geographical areas which are among the richest known in the world. The Chair, Louis Deharveng is one of the three Special Issue Editors. This volume provides information on hundreds of endemic cave invertebrates in these hotspots, and on the nature and level of threats that affect them in several sites. A small part of these species has been red-listed these last years, but most are not assessed.

T-015 Address relevant communication requests from media platforms. (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 1

Result description: One interview was conducted for the quarterly magazine *Word of Mouth*, based in Mendocino County, California, focusing on the negative impacts of guano harvesting on cave organisms, and following up a 2014 IUCN promulgation under that remit.

Summary of achievements

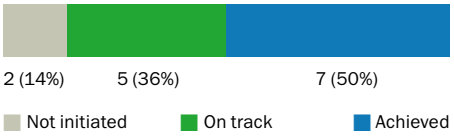
Total number of targets 2021–2025: 14

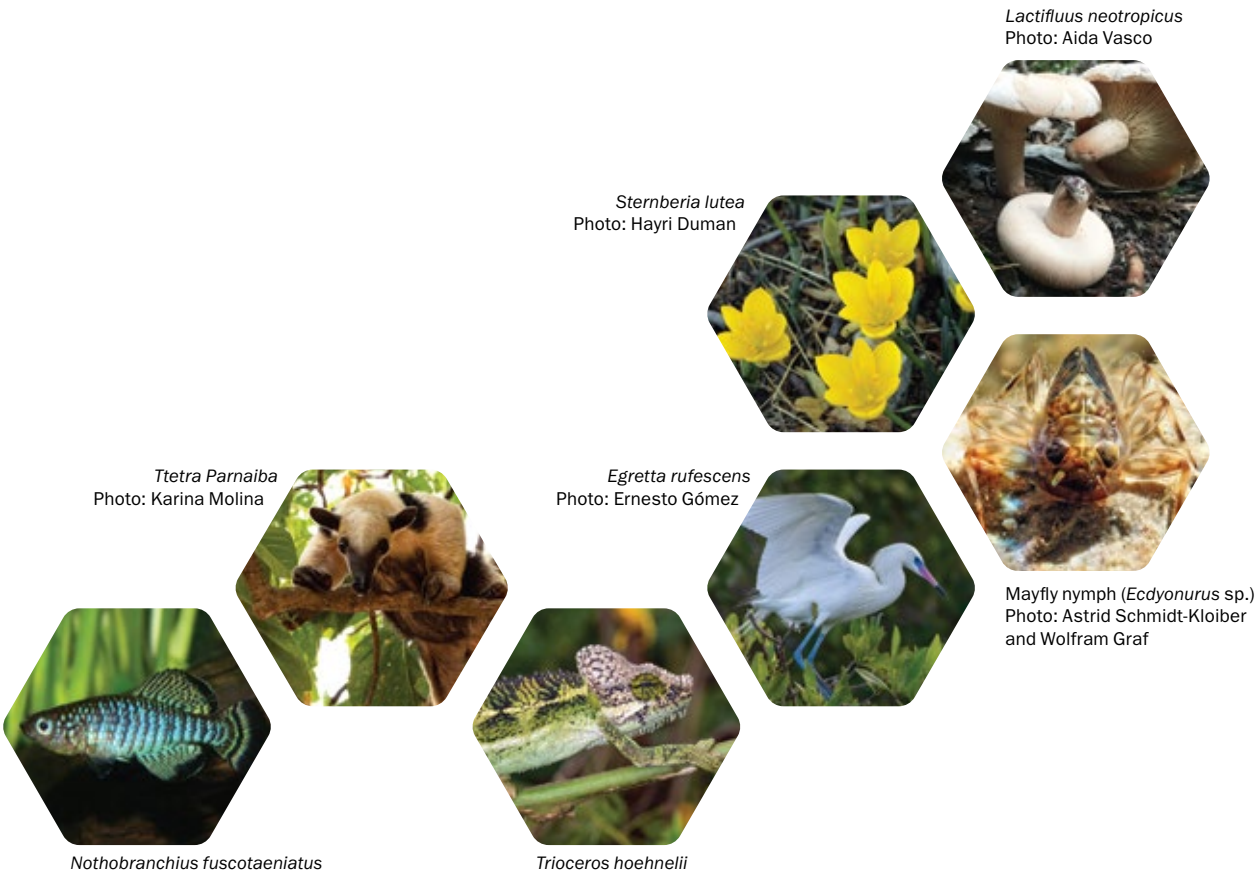
Geographic regions: 6 Global, 2 America, 4 Asia, 3 Europe, 1 Oceania

Actions during 2023:

Assess: 4 (KSR 5, 6)
Communicate: 4 (KSR 12, 13)

Overall achievement 2021–2025:





Lactifluus neotropicus
Photo: Aida Vasco

Sternberia lutea
Photo: Hayri Duman

Ttetra Parnaiba
Photo: Karina Molina

Egretta rufescens
Photo: Ernesto Gómez

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

Nothobranchius fuscotaeniatus
Photo: Csenge Nagy

Trioceros hoehnelii
Photo: Christopher V. Anderson