



Species

ISSUE 64

2023 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 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.

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 Authority 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:

Lyons, T., Walker, A., Hoffman, K. and Meredith, C. 2024. 2023 Report of the CSS United States: New Mexico BioPark Society. In: IUCN SSC and Secretariat. *2023 Report of the IUCN Species Survival Commission and Secretariat*. Gland, Switzerland: IUCN. 6 pp.

2023 Report

CSS United States: New Mexico BioPark Society



DIRECTOR
Tim Lyons
New Mexico, US



SPECIES SURVIVAL OFFICER
Anna Walker
New Mexico, US



SPECIES SURVIVAL OFFICER
Katie Hoffman
New Mexico, US



SPECIES SURVIVAL OFFICER
Clay Meredith
New Mexico, US

Mission statement

The Center for Species Survival New Mexico, established in 2018, supports strategic species conservation across the IUCN's Species Survival Commission. From the small cacti of the desert southwest to the bees and butterflies that colour our landscape and the fishes that grace our rivers, we are committed to these organisms, no matter how small. We use tools like the IUCN Red List to produce critical baseline data that guide conservation planning and action. As of June 2022, we have contributed to over 2,000 species-level extinction risk assessments, spanning 96 countries. This will inform conservation measures taken by the ABQ BioPark, our partners in New Mexico and conservationists worldwide.

Projected impact 2021-2025

Not stated yet.

Targets 2021-2025

ASSESS

T-002 Offer Red List trainings, in partnership with The Red List Unit, to new Centers for Species Survival, the local community and the broader IUCN SSC Network.
Status: On track

T-021 Build capacity for invertebrate specialist groups – including the Firefly Specialist Group, Butterfly and Moth Specialist Group, Wild Bee Specialist

Group, and Terrestrial Invertebrate Red List Authority – to complete Global Red List assessments.

Status: On track

T-022 Build capacity for plant specialist groups – including the Medicinal Plant Specialist Group, Sonoran Plant Specialist Group, and others – to complete Red List assessments.

Status: On track

T-023 Support the reassessment of European Medicinal Plants.

Status: On track

T-024 Build capacity for the Freshwater Specialist Group to complete Red List assessments and support assessment priorities of the Freshwater Biodiversity Unit.

Status: On track

T-025 Support the reptile Red List reassessment for Central American species.

Status: Not initiated

PLAN

T-003 Support, in partnership with the IUCN SSC Conservation Planning Specialist Group, the development of the Assess to Plan tools and methodology for application in both global and national processes.

Status: On track

ACT

T-007 Add germplasm accessions for 10 threatened plant species not currently known to be held in any collections to the ABQ BioPark seed bank.

Status: On track

T-013 Facilitate the creation of a captive-reared population of the highly threatened Sacramento Mountains Checkerspot Butterfly at the ABQ BioPark.
Status: Achieved

T-019 Support insect monitoring programs to work toward lowering Data Deficiency rates among Red List-assessed invertebrates.

Status: On track

NETWORK

T-004 Continue working with community partners to offer Red List trainings outside of specialist group commitments. This will further knowledge of the Red List among conservation partners, such as local University students and faculty, government agencies and even our own ABQ BioPark staff.

Status: On track

T-005 Support National Reverse the Red pilot efforts, by providing technical training to taxa experts and coordinating parties involved in each step of the One Programme Charter.

Status: On track

T-006 Establish close collaborative ties with local indigenous communities and facilitate seed banking and technical support for conservation initiatives.

Status: Achieved

T-012 Support the establishment of new Centers for Species Survival by facilitating access to necessary tools such as SIS, supporting workplan development with

relevant Specialist Group or National stakeholders, and ensuring regular communication between Species Survival Centers.
Status: On track

T-018 Conduct a Gap Analysis on the conservation status and needs of New Mexican species.
Status: Achieved

COMMUNICATE

T-009 Communicate the achievements of the Center for Species Survival New Mexico to the SSC Network by contributing one article per year to the SSC Quarterly Report.
Status: On track

T-011 Communicate the work of the Center for Species Survival New Mexico to taxa experts, industry professionals and the general public through webinars or presentations.
Status: On track

T-014 Create brand elements, such as a logotype, to facilitate marketing and add visibility to the Center for Species Survival New Mexico.
Status: Achieved

T-015 Contribute articles on species conservation work to the New Mexico BioPark Society's *BioScape* Quarterly Magazine.
Status: On track

T-016 Give interviews to the media on the work of the CSS New Mexico.
Status: On track

T-017 Communicate the work of the Center for Species Survival New Mexico to

biologists, conservationists, and industry experts at conferences via presentations or posters.

Status: On track

T-020 Contribute conservation-themed articles to Scientific Publications.
Status: On track

Activities and results 2023

ASSESS

Red List

T-002 Offer, in partnership with The Red List Unit, Red List trainings to new Centers for Species Survival, the local community, and the broader IUCN SSC Network. (KSR 6)

Number of people trained in Red List Assessment and/or Red List Trainer Training: 35

Result description: In April of 2023, Clay Meredith and Anna Walker delivered an in-person Red List Assessor Training to 16 members of the IUCN SSC Medicinal Plant Specialist Group at United Plant Savers, in Ohio. In October of 2023, Janet Scott and Clay Meredith delivered two Red List Trainer Trainings, one in-person and one remote, to 19 people.

T-021 Build capacity for invertebrate Specialist Groups – including the Firefly Specialist Group, Butterfly and Moth Specialist Group, Wild Bee Specialist Group, and Terrestrial Invertebrate Red List Authority – to complete Global Red List assessments. (KSR 6)

Number of global Red List reassessments completed: 27

Result description: In December of 2023, 27 assessments that Anna Walker reviewed were published on the Red List (21 Australian Bees and four Fireflies from Hong Kong).

T-022 Build capacity for plant Specialist Groups – including the Medicinal Plant Specialist Group, Sonoran Plant Specialist Group, and others – to complete Red List assessments. (KSR 6)

Number of global Red List reassessments completed: 15

Result description: In April of 2023, a Red List assessment workshop was held to support the IUCN SSC Medicinal Plant SG. Sixteen specialist group members were trained, and 15 assessments were reviewed. A further 81 assessments were drafted for the IUCN SSC Sonoran Plants SG using automated scripts developed at BioPark.

T-023 Support the reassessment of European Medicinal Plants. (KSR 6)

Number of national Red List reassessments published: 0

Result description: So far, 280 assessments have been drafted. Forty have been completed since the start of the year. The remaining 80 will be completed in the next month. The project will be completed by April 2024.

T-024 Build capacity for the Freshwater Specialist Group to complete Red List assessments and support assessment priorities of the Freshwater Biodiversity Unit. (KSR 6)

Number of global Red List reassessments completed: 559

Result description: Thirty-four Korean endemics were assessed in 2022-2023 and a total of 525 additional South American freshwater fishes were reviewed in 2023.

ACT

Conservation actions

T-007 Add germplasm accessions for 10 threatened plant species not currently known to be held in any collections to the ABQ BioPark seed bank. (KSR 10)

Number of threatened species benefiting from *ex situ* conservation action: 5

Result description: During the 2023 field season, three species were added to our germplasm collection (Gypsum Townsend's Aster, Todilto Blazingstar, and Sivinski's Scorpionweed). In addition, we were involved in the salvage of at-risk plants including the Aztec Gilia, which is threatened by oil and gas development, and Lordsburg Noino.

T-019 Support insect monitoring programs to work toward lowering Data Deficiency rates among Red List-assessed invertebrates. (KSR 10)

Number of field seasons where monitoring for butterflies and fireflies has been carried out: 2

Result description: In 2023, we completed our third season of butterfly monitoring through the New Mexico Butterfly Monitoring Network. We had 34

volunteers running surveys on 36 routes. A total of 337 surveys were completed and 8,915 individual butterflies, from 118 different species, were counted. In 2023, we completed our third season of Firefly surveys in the State of New Mexico. We again partnered with the Western Firefly Project and were able to confirm two sightings submitted by community scientists in New Mexico. We were able to confirm the presence of a threatened firefly, the Southwest Spring Firefly (*Bicellonycha wickershamorum*) in southwestern New Mexico which is a new state record. In addition, we worked with the Xerces Society to roll out *Firefly Atlas*, a new data entry system that will collect and provide long term monitoring data for firefly populations.

NETWORK

Capacity building

T-004 Continue working with community partners to offer Red List trainings outside of specialist group commitments. This will further knowledge of the Red List among conservation partners, such as local University students and faculty, government agencies and even our own ABQ BioPark staff. (KSR 1)

Number of trainings offered to partner organizations: 1

Result description: We are supporting students at UNM in writing Red List assessments for rare and threatened arthropods in New Mexico. These assessments will inform the Species of Greatest Conservation Need pollinator list for inclusion in the New Mexico State Wildlife Action Plan. New Mexico Game and Fish and Natural Heritage New Mexico are other major partners in this effort.

T-012 Support the establishment of new Centers for Species Survival by facilitating access to necessary tools such as SIS, supporting workplan development with relevant Specialist Group or National stakeholders, and ensuring regular communication between Species Survival Centers. (KSR 1)

Number of training tools/materials created and number of CSS Partners supported: 0
Result description: In 2023, we launched onboarding resources and started beta testing the onboarding process.

COMMUNICATE

Communication

T-011 Communicate the work of the Center for Species Survival New Mexico to tax experts, industry professionals and the general public through webinars or presentations. (KSR 13)

Number of presentations or webinars delivered: 12

Result description: In 2022, we delivered eight presentations to a wide variety of audiences and attended four tabling events to discuss our work with community partners. Presentations included: (1) In February of 2023, Anna Walker organized a meeting with region firefly experts to organize Southwestern firefly research and monitoring efforts; (2) In March of 2023, Anna Walker gave a presentation on 'Butterflies, Community Science, and the IUCN Red List of Threatened Species' as a guest speaker to the Ventura County Monarch and Pollinator Regional Advisory Committee; (3) Anna Walker presented 'Introduction to the IUCN Red List Categories and Criteria' at a firefly conservation webinar in the

Philippines; (4) In June of 2024, Anna Walker tabled at the BioPark's Pollinator Week event to spread awareness of the CSS New Mexico; (5) In June and July of 2023, Anna Walker joined the Xerces Society in Arizona to present at a series of workshops to encourage participation in the Firefly Atlas; (6) In August of 2023, Anna Walker and Jason Schaller attended The Summer Wings Festival at the Rio Grande Nature Center State Park. We set up a table and shared the work of the BioPark BUGarium and NMBPS with the visitors. Anna Walker also gave a talk, 'Butterflies of the Middle Rio Grande Ecosystem'; (7) Anna Walker presented 'Butterflies of the Middle Rio Grande' at a pollinator day hosted by Valle de Oro National Wildlife Refuge; (8) In November 2024, Clay Meredith gave a presentation to the Native Plant Society of New Mexico outlining germplasm collections at the BioPark; (9) In May 2023, Tim Lyons presented 'Freshwater fishes of Central America: Distribution, assessment, and major threats' to the Latin American Fisheries Congress in Cancun, Mexico; (10) In September 2023, Tim Lyons presented 'Rio Grande Silvery Minnow augmentation and propagation' to the Association of Zoos and Aquariums in Columbus, Ohio; (11) In September 2023, Tim Lyons presented 'Shoal Coalition of Zoos and Aquariums' to the European Association of Zoos and Aquariums Freshwater Teleost Taxon Advisory Group in Helsinki, Finland (remote), and (12) In September 2023, Tim Lyons presented 'Center for Species Survival New Mexico: Global and Sub-global assessments to inform biodiversity conservation' to the 78th United Nations general Assembly Science Summit.

T-015 Contribute articles on species conservation work to the New Mexico BioPark Society's BioScape Quarterly Magazine. (KSR 13)

Number of articles in the *BioScape* Magazine written by or about the work of the CSS New Mexico: 3

Result description: This year, three articles about the work of CSS New Mexico appeared in the New Mexico BioPark Society's magazine, *BioScape*. They were titled 'Planting Hope: Seed Banking and Plant Restoration Projects at the ABQ BioPark', 'Light in the Dark: Searching for Fireflies in the Land of Enchantment', and 'Species Conservation at the ABQ BioPark: What We're Doing and Where We're Going'.

T-016 Give interviews to the media on the work of the CSS New Mexico. (KSR 13)

Number of articles run by media local as well as international mentioning the work of the CSS New Mexico: 4

Result description: In 2023, (1) Anna Walker was interviewed by Yale Environment 360 on firefly declines; (2) Anna Walker wrote an op-ed titled 'Managing the state's landscapes alongside nature, not against it' in the Albuquerque Journal about APHIS spray programs on public lands; (3) Anna Walker was interviewed by National Geographic: News and Science: Newsletter about the Monarch Butterfly petition decision, and (4) Tim Lyons and Anna Walker were interviewed by *Pelecanus* on their Possibilists series.

T-020 Contribute conservation themed articles to Scientific Publications. (KSR 13)

Number of scientific publications authored on: 2

Result description: In 2023, Tim Lyons co-authored '[Horizon scanning for potentially invasive non-native marine species to inform transboundary conservation management – example of the northern Gulf of Mexico](#)' (O'Shaughnessy, K.A., et al. 2023), and the paper '[Thermal tolerance for three ornamental tankbuster catfishes](#)' (Tuckett, Q.M., et al. 2023), both publications in *Aquatic Invasions*.

Scientific meetings

T-017 Communicate the work of the Center for Species Survival New Mexico to biologists, conservationists and industry experts at conferences via presentations or posters. (KSR 12)

Number of presentations delivered in scientific events: 1

Result description: In 2023, the team presented a poster on the work of the CSS New Mexico at the WAZA Conference.

Summary of achievements

Total number of targets 2021–2025: 22

Geographic regions: 13 Global, 8 America, 1 Europe

Actions during 2023:

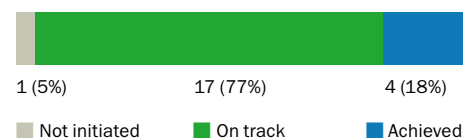
Assess: 5 (KSR 6)

Act: 2 (KSR 10)

Network: 2 (KSR 1)

Communicate: 5 (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