

2021 Report

IUCN SSC Seahorse, Pipefish and Seadragon Specialist Group



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NUMBER OF MEMBERS

41

SOCIAL MEDIA AND WEBSITE

Facebook: @iucnseahorse

Instagram: @iucnseahorse

Twitter: @IUCNSeahorse

Website: <https://www.iucn-seahorse.org>

Mission statement

To promote the long-term conservation of the world's Syngnathiform (seahorses, pipefishes, seadragons and their relatives) fishes through the illumination and alleviation of threats to wild populations and their ocean habitat.

Projected impact 2021–2025

The Seahorse, Pipefish and Seadragon Specialist Group (SPS SG) is focusing on relieving pressures (current and anticipated) on species assessed as threatened on the IUCN Red List, and on the many that are Data Deficient. The threatened species are concentrated in four geographic areas: Southeast Asia (marine and freshwater), South Africa and Atlantic South America. We are generating action at the national level that can make a powerful difference: collaborations, conservation assessments, action plans, implementation of existing laws and more. We are particularly determined to (i) support better management of estuarine systems (where many threatened species are found), (ii) reduce the impacts of bottom trawling and other non-selective fisheries on a wide tranche of species, (iii) ensure that CITES listing of seahorses is made effective and (iv) engage the world in caring about these most remarkable of fishes. We are gathering all possible

information to improve Red List assessments for the Data Deficient species, while supporting work on taxonomy and phylogeny that continues to identify yet more syngnathid fish species. A new area of endeavour lies in assessing the likely impacts of climate change on our species with a view to future-proofing our fishes. Our Specialist Group will embrace yet more diversity in membership and engage colleagues from underrepresented sectors, all of whom can offer so much to our globally distributed taxa.

Targets 2021–2025

ASSESS

- T-019 Determine priority species of syngnathid for assessment/reassessment.
- T-020 Find and collate all available information on priority species, including obscure information and grey literature.
- T-021 Complete Red List assessments for priority species.
- T-022 Resolve taxonomic uncertainties for syngnathids.
- T-024 Promote data collection for seahorses, pipefishes and seadragons, especially for Data Deficient species.
- T-023 Create reliable taxonomic tools for syngnathids.

T-025 Identify and determine Key Biodiversity Areas (KBAs) for syngnathids.

PLAN

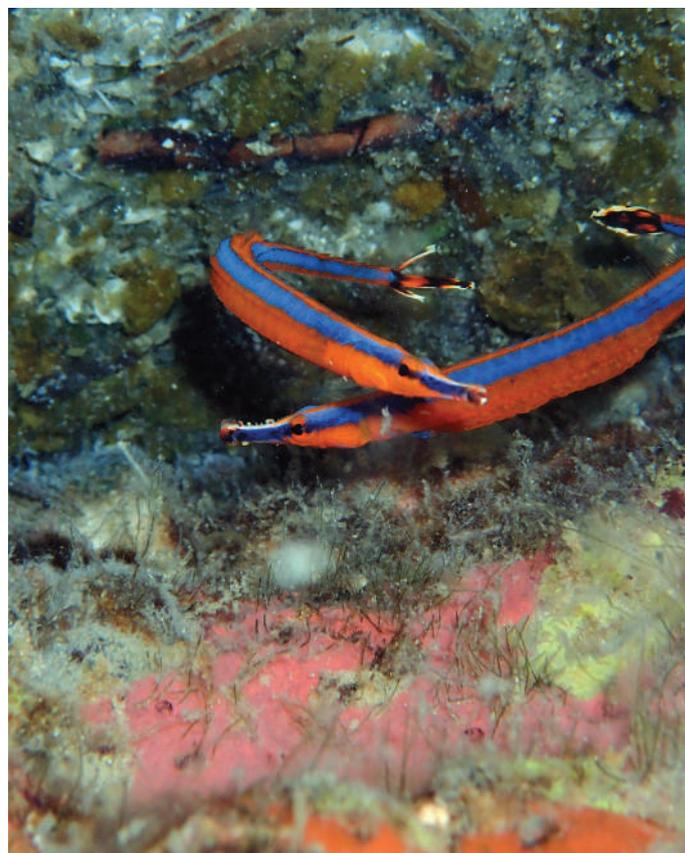
- T-001 Create and disseminate a Priority Action Statement for Knysna Seahorse (*Hippocampus capensis*; Endangered – South Africa).
- T-002 Create and disseminate a Priority Action Statement for White's Seahorse (*Hippocampus whitei*; Endangered – Australia).
- T-003 Create and disseminate a Priority Action Statement for Estuarine Pipefish (*Syngnathus watermeyerii*; Critically Endangered – South Africa).
- T-004 Create and disseminate a Priority Action Statement for *Microphis pleurostictus* (Endangered – Philippines).
- T-005 Create and disseminate Priority Action Statements for Vulnerable species.
- T-006 Improve implementation of national assessments, rules and laws that affect syngnathids (for priority regions).

ACT

- T-007 Develop action plan for syngnathids (especially those of concern) in Argentina, Brazil, South Africa and Malaysia to improve national assessments and rules and laws that affect syngnathids.
- T-030 Develop SPS SG urgent action response capacity.



An undescrbed pipefish of the genus *Corythoichthys* in the Egyptian Red Sea
Photo: Richard Smith - OceanRealmImages.com



Bluestripe Pipefish (*Doryrhamphus excisus*) off Mozambique
Photo: Louw Claassens

NETWORK

T-018 Collaborate with aquariums, multiplier organisations, NGOs and universities.

T-026 Catalyse joint meeting with Specialist Groups for other marine taxa.

T-027 Find funding for an SPS SG programme officer and meetings every two years.

T-028 Grow SPS SG expertise in strategic ways by taxon, region, discipline, etc.

T-031 Mobilise IUCN for action to support SPS SG needs/collective marine conservation.

T-032 Develop strategic partnerships/synergies with other organisations.

COMMUNICATE

T-011 Use syngnathid flagship species as tools to expose and reverse perverse incentives.

T-012 Create communications tools regarding perverse incentives for target region coastal marine environments.

T-013 Catalyse campaign to effect change in perverse subsidies in coastal marine environments.

T-014 Raise the profile of syngnathid conservation issues (public, policy makers, donors).

T-015 Develop outreach capacity (develop key messages, identify key audiences, including fishers).

T-016 Create synopsis of issues for donors, policy makers, etc.

T-017 Deploy social media strategy.

T-029 Use communications capacity to enhance SPS SG progress.

Activities and results 2021

ASSESS

Red List

T-019 (KSR 6)

Number of new global Red List assessments completed: 1

Result description: A list of priority species of syngnathids for assessment has been identified and created. A draft plan has been established to complete assessments moving forward.

T-019 (KSR 6)

Number of global Red List reassessments completed: 1

Result description: A list of priority species of syngnathids for reassessment has been identified and created.

T-020 (KSR 6)

Number of new global Red List assessments completed: 0

Result description: In 2021, information on newly described seahorse species was collated to help with IUCN Red List assessment through the work of Project Seahorse and volunteers.

T-020 (KSR 6)

Number of global Red List reassessments completed: 0

Result description: In 2021, new data and knowledge was collated on both priority and non-priority species on a regular basis which will aid in the reassessments of syngnathid species under our remit.

T-021 (KSR 6)

Number of new global Red List assessments completed: 0

Result description: In 2021, our SPS SG created a list of priority syngnathid species in need of assessment (newly described species) and those in need of reassessment where new information is available to update conservation status or where current assessments will soon expire. A draft plan to tackle the assessment/reassessment of syngnathid species was created in consultation with SPS SG members. Regional workshops to gather information for assessments of syngnathid species are planned for 2022.

Research activities

T-022 (KSR 5)

Number of scientific publications about species research that acknowledge SSC affiliation: 1

Result description: In 2021, Specialist Group Member and Focal Point for



Knysna Seahorse (*Hippocampus capensis*)
Photo: Louw Claassens

Taxonomy and Evolution, Graham Short, identified and described a new genus within the family Syngnathidae and provided a redescription of the genera *Acentronura* and *Idiotropiscis*. The new genus *Cylix* includes the recently-described Manaia Pygmy Pipehorse (*Cylix tupareomanaia*) from New Zealand. The first genome scale analysis of syngnathid phylogeny, including 183 species, was completed in 2021 and will be published in 2022. In addition, Graham Short has been working on the revision of the *Hippocampus* genus. Data from his analysis will be published in late 2022. A checklist of all syngnathiform fishes is in the process of being drafted.

T-023 (KSR 5)

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

Result description: Discussions and plans have begun to create a seahorse identification guide for Australia to assist researchers, community scientists and divers and provide an up-to-date list of valid species in the country.

T-025 (KSR 6)

Number of new KBAs confirmed in the World database of KBAs (WDKBA): 0

Result description: Although no new KBAs have been established, plans to initiate discussion and engagement to create, identify and determine KBAs for syngnathids are planned for early 2022.

PLAN

Planning

T-001 (KSR 8)

Number of plans invited/endorsed by national governments/conservation authorities: 0

Result description: This target was achieved in 2018. However, new data and research warrants an update to the Priority Action Statement and the development of a Recovery Action Plan for this species with contribution, engagement and endorsement from stakeholders, national governments and conservation authorities.

T-002 (KSR 8)

Number of plans invited/endorsed by national governments/conservation authorities: 1

Result description: This target was achieved in 2019. The Priority Action Statement for White's Seahorse (*Hippocampus whitei*) was the basis for and aided in the creation of a New South Wales Department of Primary

Industries Priorities Action Statement promoting the recovery of this species in New South Wales, Australia.

T-003 (KSR 8)

Number of conservation plans/strategies updated: 0

Result description: Louw Claassens, our Focal Point for Africa, is leading the development of a Recovery Action Plan for the Estuarine Pipefish (*Syngnathus watermeyeri*; Critically Endangered), found in only two estuaries in South Africa. The SPS SG supported Louw to obtain a National Geographic grant. Over the past two years, the research team conducted field surveys to determine the current status of the species as well as established the efficacy of using eDNA to detect the species, aimed at enabling additional long-term monitoring. Data from this research will be used to update the IUCN Red List assessment for this species. Once the assessment is complete, a Recovery Action Plan will be finalised. In addition, four workshops were held with key stakeholders which focused on the development of a Recovery Action Plan for *S. watermeyeri* that will incorporate the most up-to-date research findings.

Providing training on seahorse population monitoring in Vilankulo, Mozambique
Photo: Louw Claassens



Policy

T-006 (KSR 9)

Number of policies where SSC members provided technical input: 0

Result description: In order to achieve this target, the implementation of relevant rules and laws that affect syngnathids were documented for Argentina, Brazil and South Africa. In addition a large review partially funded by the IUCN Internal SSC grant documented national conservation assessments and legislation for the over 130 countries where syngnathids are found. This review was completed by Project Seahorse team members with considerable input from Specialist Group members in 2021. The report was published as a University of British Columbia (UBC) Fisheries Centre Research Report entitled *Identifying national conservation status, legislation and priorities for syngnathid fishes globally*. Results of this research were presented at an international meeting for syngnathid researchers, SyngBio, in May 2021 and has been added to the IUCN SSC SPS SG website as a living document. Further work in the quadrennium will focus on disseminating this information and encouraging specific policies/objectives to increase national conservation assessments and rules and laws to protect syngnathids at the national level.

ACT

Conservation actions

T-030 (KSR 10)

Number of actions addressing major drivers/emerging threats of species or population loss: 2

Result description: In 2021, with support and unanimous approval of our Specialist Group members, we finalised our Urgent

Action Response Document. This document is publicly available on the Specialist Group website and can be used by scientists, non-scientists, government agencies and/or community members to report on and bring attention to concerns and emerging threats to syngnathids in their region/country. Incoming reports will then be documented and used by Specialist Group members to develop concrete actions/plans to address emerging threats and concerns to syngnathids. In response to the environmental disaster caused by the cargo ship M/V X-Pearl off the coast of Sri Lanka, the SPS SG wrote a statement on request of Oceanswell (<https://oceanswell.org/>) that identified and described the threats of oil spills and microplastics to syngnathid populations. This statement is available on their website: <https://oceanswell.org/resources-on-mv-xpress-pearl>.

Policy

T-007 (KSR 10)

Number of position statements addressing major drivers/emerging threats of species or population loss: 1

Result description: In 2020, a draft report documenting the rules and laws that affect syngnathids in Brazil was created. Updates to the draft report are currently in progress and the report will be made publicly available on the SPS SG website in 2022. Plans have been initiated to develop an action plan for syngnathids in Brazil in 2022 to identify and address major drivers and emerging threats to syngnathid species. Position statements on the effects of tourism and boat noise to syngnathid populations are the current priorities for 2022. The implementation of relevant rules and laws that affect syngnathids were

documented for Argentina, Brazil and South Africa and added to the Specialist Group website. A large review partially funded by the IUCN Internal SSC grant documented national conservation assessments and legislation for the over 140 countries where syngnathids are found. This review was published as a UBC Fisheries Centre Research Report and added to the SPS SG website as a living document in 2021. New knowledge gained from this study on national assessments and legislation will support the implementation of IUCN World Conservation Congress Resolution WCC-2020-Res-095 *Conservation of seahorses, pipefishes and seadragons (family Syngnathidae)*. In particular, it “calls on all members, especially State and Government Agency Members, to by 2022, ensure that the status of all syngnathids is assessed and included in national/regional Red Lists as warranted.” Knowledge gaps identified in this report will help guide our focus to those range states where national assessments are largely lacking and will improve the effectiveness of the resolution.

NETWORK

Membership

T-028 (KSR 2)

Number of SSC members recruited: 5

Result description: In 2021, five new members were invited to join the Specialist Group. New members increased our geographic scope by adding members from the Philippines, Viet Nam, Hong Kong, Italy and the US with specialities ranging from fisheries, wildlife conservation, management and trade as well as ecology, evolutionary ecology and population genetics.

An Ornate Ghost Pipefish (*Solenostomus paradoxus*) in the Egyptian Red Sea
Photo: Richard Smith - OceanRealmImages.com



A pair of Robust Ghost Pipefish (*Solenostomus cyanopterus*) in the Egyptian Red Sea
Photo: Richard Smith - OceanRealmImages.com

Synergy

T-018 (KSR 3)

Number of connections/collaborations made: 2

Result description: Through the research led by Specialist Group member and Focal Point for Global Fisheries and Trade, Sarah Foster, we connected with the Dallas World Aquarium and our Specialist Group Focal Point for Ex situ, Paula Carlson, as well as other stakeholders, to complete a UBC Fisheries Centre Research Report. The report, entitled *Changes in the international trade in live seahorses (Hippocampus spp.) after their listing on CITES Appendix II*, investigated the international live trade in seahorses by species, countries of origin, whether specimens were wild sourced or cultured, destinations, volumes, and their changes over time. Project Seahorse team members, with members of the IUCN SSC Seahorse, Pipefish and Seadragon Specialist Group (SPS SG, <https://www.iucn-seahorse.org>), were involved in this work.

T-031 (KSR 3)

Number of connections/collaborations made: 0

Result description: The now accepted IUCN World Conservation Congress Resolution WCC-2020-Res-095 *Conservation of seahorses, pipefishes and seadragons (family Syngnathidae)* will serve as a vital tool providing a synopsis of issues for donors, policy makers and the public to both raise awareness and catalyse action across and beyond the IUCN.

COMMUNICATE

Communication

T-014 (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 7

Result description: In 2021, we increased the visibility and profile of syngnathid conservation issues to the public, policy makers and donors through social media posts highlighting Specialist Group members and their published research, using Twitter/Instagram/Facebook posts and threads, blogs and website content. We: (1) highlighted the work of three Specialist Group members on social media, covering their work in Australia, Portugal and South America; (2) posted and shared two blogs describing our review of national conservation assessments and legislation of syngnathids across the globe, as well as

a Twitter thread focusing on the summary and key messages from our results; (3) published a large review documenting the global extinction risk of seahorses, pipefishes and their near relatives, which was on the cover of the July issue of *Oryx*, and created a Twitter thread summarising our main results; (4) featured two blogs on the SPS SG website that described research on the Endangered Knysna Seahorse in South Africa by Specialist Group member Louw Claassens and a guest blog that tells the inspiring story 'From poaching to conservation – searching for seahorses in Mozambique'; (5) created a website page with key information on IUCN World Conservation Congress Resolution WCC-2020-Res-095 *Conservation of seahorses, pipefishes and seadragons (family Syngnathidae)* and our report on national conservation assessments and legislation of syngnathids; (6) raised the profile of global syngnathid research by sharing and live tweeting throughout SyngBio 2021, a meeting of over 200 researchers from 24 countries around the world; (7) shared research of Specialist Group members including description of new species work on Endangered species and much, much more.

T-015 (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 5

Result description: In 2021, we increased the visibility and profile of syngnathid conservation issues to the public, policy makers and donors through social media posts highlighting Specialist Group members and their published research, using Twitter/Instagram/Facebook posts and threads, blogs and website content. Key messages focused on our main areas of research for 2021, including: (1) global extinction risk for seahorses, pipefishes and their relatives; (2) identifying national conservation status, legislation and priorities for syngnathid fishes globally; (3) IUCN World Conservation Congress Resolution WCC-2020-Res-095 *Conservation of seahorses, pipefishes and seadragons (family Syngnathidae)*; (4) trade and exploitation of seahorses (both live and dried trade); (5) research on the most threatened syngnathids (Knysna Seahorse, *Hippocampus capensis*; White's Seahorse, *Hippocampus whitei*; Estuarine Pipefish, *Syngnathus watermeyerii*). In addition, we also shared key messages on social media dealing with issues pertaining to the impacts of bottom trawling and perverse subsidies.

T-017 (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 7

Result description: Our Specialist Group remains active on social media through Twitter, Instagram and Facebook, where we share our many successes and achievements by introducing the work of our SPS SG members. In 2021, we highlighted the work of three specialist group members on social media covering their work in Australia, Portugal and South America. We also posted and shared two blogs describing the review of national conservation assessments and legislation of syngnathids across the globe as well as a Twitter thread focusing on the summary and key messages from our results. In addition, we also featured two blogs on the SPS SG website that described research on the Endangered Knysna Seahorse in South Africa by Specialist Group member Louw Claassens and a guest blog that tells the inspiring story 'From poaching to conservation – searching for seahorses in Mozambique'.

T-029 (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 5

Result description: Our Specialist Group remains active on social media through Twitter, Instagram and Facebook, where we share our many successes and achievements including five blogs covering research on the Endangered Knysna Seahorse (*Hippocampus capensis*) in South Africa, documenting our SPS SG review of national conservation status, legislation and priorities for syngnathid fishes globally, highlighting research and conservation work from colleagues in Mozambique and documenting our SyngBio meeting of syngnathid researchers. Our Specialist Group regularly shares new and exciting research and the conservation efforts of our Specialist Group members on social media and through news stories in the media. A further three blogs were created to highlight amazing species observed through our iSeahorse community science platform. Significant communication and outreach through regular posts on social media serve to promote the great conservation, research and outreach activities made by our SPS SG members. These posts showcase the work they are doing around the world to protect these magical fishes.

Acknowledgements

The SPS SG benefits from support to Project Seahorse, acting as the core of the SPS SG. Project Seahorse is hugely grateful to our long-time major partner in marine conservation, Guylian Belgian Chocolates, and to our faithful supporters at the Langar Foundation. Sincere thanks to Oceanário de Lisboa and team member Catarina Fonseca for their tremendous help in drafting Red List assessments of two seahorse species. Project Seahorse also thanks our host institutions, the University of British Columbia in Canada and Zoological Society of London in the UK, who provide support for the Chair and some SPS SG and Project Seahorse activities.

Summary of achievements

Total number of targets 2021–2025: 29

Geographic regions: 3 Africa, 1 Asia, 24 Global and 1 Oceania

Actions during 2021:

Assess: 8 (KSR 5, 6)

Plan: 4 (KSR 8, 9)

Act: 2 (KSR 10)

Network: 3 (KSR 2, 3)

Communicate: 4 (KSR 13)

Overall achievement 2021–2025:

