Dear friends,

If feels odd to be writing comments about 2019 when we are in the midst of an unimaginable 2020. Throughout 2019, we were deeply aware that 2020 was to be an epic year for conservation and the ocean. So we got ready to effect change...

We prepared events and policies for a World Conservation Congress in June 2020 that would engage well over 10,000 of the world’s frontline conservationists, from 1400+ member organizations. We drafted metrics on sustainable fisheries for the new Global Biodiversity Targets, to be considered by 196 nations in October 2020. We obtained a grant from the United States National Oceanographic and Atmospheric Administration to improve implementation of global export trade controls on seahorses, with a plan to survey ten countries.

[Once Covid-19 came along most of these initiatives for 2020 were suspended.]

Happily, 2019 also saw many other vigorous Project Seahorse initiatives. We published novel analyses on how marine protected areas affect invertebrates, which matter to fishers and seahorses alike. We completed detective work in the Philippines, probing its national seahorse trade, in a collaboration with the national government. We catalysed an agreement by 182 countries to address rampant illegal trade in seahorses. And so much more.

It was a good year, rich in notable achievements.

As 2020 unfurls, we are enormously grateful for meaningful work that will help inform how the world emerges from the pandemic. We send you all warm wishes for good health and many hours in the great outdoors, preferably exposed to calming ocean breezes.

Yours, in conservation and hope

Prof. Amanda Vincent
Director and Co-founder, Project Seahorse

Amanda Vincent celebrating our partnership with Guylian Belgian Chocolates with one of their delicious bars. Photo by Regina Bestbier/Project Seahorse
MISSION

Project Seahorse is committed to the conservation and sustainable use of the world’s coastal marine ecosystems.

Seahorses are great ambassadors for ocean health. Actions to safeguard seahorses will help thousands more species.

Saving seahorses means saving the seas.

Project Seahorse finds marine conservation solutions by addressing interdependencies between marine life and human communities. Concentric pressures bear down on individual animals, making an “onion world” in which each layer affects the others.

Seahorses sit at the centre of our world. To meet their needs we work at every layer: studying the animals, protecting marine communities and ecosystems, supporting dependent people, guiding resource managers, encouraging national and global governance, and inviting public engagement.

Front cover: Short-snouted seahorse (Hippocampus hippocampus). Photo by Janny Bosman/Guylian Seahorses of the World (SOTW)
Where we work

Sarah Foster (right) at a CITES meeting in Geneva, regulating international trade in wild species. Photo by Alessandro Ponzo

Newly discovered Vincent’s pipefish (Leptonotus vincentae). Photo by Diego Luzzatto

Bargibant’s pygmy seahorse (Hippocampus bargibanti) lives exclusively on fan corals. Photo by Anouschka Mornie/Guylian SOTW
We are engaged in cutting-edge research and highly effective conservation action, in collaboration with governments, local communities, and other stakeholders, in 34+ countries and 6 continents.

Xiong Zhang led a seahorse conservation workshop in Qingdao, China. Xiong and participants—local fishers dedicated to protecting seahorse habitats—are making the underwater sign for “seahorse”. Photo by Xiong Zhang/Project Seahorse

The team that uncovered recent illegal seahorse exploitation and trade in the Philippines—Myrtle Arias, Amanda Vincent, Sarah Foster, Angelie Nellas and Lily Stanton (photographed in Vancouver). Photo by Regina Bestbier/Project Seahorse

Tanvi Vaidyanathan discussing trawl bycatch destined for chicken feed in India. Photo by Amanda Vincent/Project Seahorse
Advancing seahorses, pipefish & seadragons on the world’s formal conservation agenda

Project Seahorse led the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Seahorse, Pipefish and Seadragon Specialist Group in crafting a formal Motion that guides the IUCN to take bold action for syngnathid* fishes. We are delighted that the government of Monaco formally proposed this Motion, supported by many other IUCN Members.

The IUCN brings 1400+ member organizations (governments, non-governmental organizations and indigenous peoples) to the same table with a shared goal of conserving nature. Every four years, IUCN members meet at the World Conservation Congress to debate and adopt Motions on pressing conservation issues. These decisions play a huge role in framing the conservation community’s aims and expectations, and are widely influential on policy and practice, from local to global levels.

Our motion - Motion 111 - promotes vital conservation action for seahorses, pipefishes and seadragons. Adopting this Motion will benefit syngnathids and many other forms of marine life by improving fisheries sustainability, protecting areas where syngnathids are found, enhancing management of entire watersheds, and taking precautionary approaches to aquaculture and releases.

Motion 111 went through four months of online discussion, revision and modification by IUCN Member organizations… and emerged very much intact. It will be subject to electronic vote in October 2020.

Leafy seadragon (*Phycodurus eques*) - one of three seadragon species. Photo by Gaetano Gargiulo/Guylian SOTW
Our colleague Dr. Diego Luzzatto discovered a new pipefish in Patagonia and named it *Leptonotus vincentae* (Vincent’s pipefish) after Dr. Amanda Vincent. It’s a fascinating species, with females displaying bold courtship colouration. Photo by Diego Luzzatto.
Securing shallow seas

Shallow seas contain many of the planet’s most valuable and threatened marine ecosystems, including estuaries, mangroves, reefs, and seagrass meadows. These habitats are home to seahorses and their relatives. Project Seahorse combines conservation research and stakeholder engagement with work on fisheries management and marine protected areas to help restore and safeguard shallow seas.

Discovering the effects of marine reserves on invertebrates

Conserving marine invertebrates is critical for securing healthy shallow seas, and yet conservation attention for invertebrates is very rare, especially compared to vertebrates. Sponges and mussels filter and clean sea water, corals and clams create the physical structures that make up reefs, and almost every marine fish (and certainly all syngnathid fishes) will have fed on invertebrates at some point during its life cycle.

Project Seahorse aims to drive a holistic approach to shallow seas conservation by discerning which conservation interventions work best for marine invertebrates. This is particularly important because many women fishers depend primarily on gleaning (collecting) invertebrates. Most recently, we have been focusing on these taxa in the Central Philippines, where we have worked for over 20 years. To this end, our PhD candidate Kyle Gillespie and his research assistants dived on remote coral reefs through the night - when many of these creatures emerge from hiding.

“We found that marine reserves can increase the abundance of invertebrates important in local fisheries by 1.5 to 2.3 times. We saw this both inside the reserves and in areas immediately outside reserves, suggesting spillover of animals from reserves into nearby areas,” explained Kyle, adding that not all marine reserves were equal. Older reserves and reserves with more complex habitat had much higher abundances of invertebrates. Interestingly, invertebrate recovery did not map well onto fish recovery in reserves.

Kyle also discovered that ecosystem services provided by marine invertebrates are more prevalent inside reserves, especially filter feeding by clams, mussels, sponges, and others. Our work shows that marine reserves may play an important role in invertebrate conservation by increasing their abundance and helping conserve their functions that are vital for healthy shallow seas.

Giant clam (Tridacna crocea), a heavily exploited invertebrate species. Photo by Kyle Gillespie/Project Seahorse
Kyle Gillespie and his research assistant Gerry Sucano, surveying the Danajon Bank coral reef for invertebrates. Gerry is using a measuring stick to gauge structural complexity of the reef. Photo by Kyle Gillespie/Project Seahorse

Aeolid nudibranch (sea slug), a colourful marine invertebrate. Photo by Kyle Gillespie/Project Seahorse

Small-scale fisher processing marine snails in Batasan, Danajon Bank, Philippines. Photo by Kyle Gillespie/Project Seahorse
Making fisheries & trade sustainable

More than 70 million seahorses are caught in fisheries, primarily in bottom trawling and other damaging gear, and about 15-20 million seahorses are traded, live and dead, around the world each year. They are used in traditional medicines, for display in aquariums, and as curios. We investigate and survey global seahorse trade and work with the United Nations’ Convention on International Trade in Endangered Species (CITES) to drive responsible regulation of seahorse exports.

Uncovering seahorse exploitation and trade in the Philippines

Criss-crossing the Philippines by boat, bus, and motorcycle our intrepid team in the field - biologists Angelie Nellas and Myrtle Arias - uncovered ongoing seahorse trade and exploitation. Our data indicate that seahorse fishing and trade is still significant although it has dropped a lot in the last 20 years ago.

Decades ago, the Philippines was the second largest supplier of dried seahorses to Hong Kong and Taiwan, after Thailand - which claimed the number one spot. Reports of declining seahorse catches swiftly followed. Then in 1998, the Philippines government banned the capture and trade of all CITES* listed species – including seahorses.

We partnered with the Philippines government agency, the Bureau of Fisheries and Aquatic Resources, to uncover changes in seahorse trade since 1998. Angie and Myrtle interviewed 280+ fishers across 17 provinces and 29 municipalities, measuring 200+ dried seahorses from fishers and buyers, and finding new gear types designed specifically to target seahorses. They concluded that seahorses were still sold in great numbers in the Philippines, with tallies of >1.7 million individuals per year in 2019, compared to >4 million per annum in 1998.

We found that gears specifically targeting seahorses (micro-trawls, push nets, compressor divers, and spear and skin divers) caught the greatest number of individuals. While apparently worrying at first glance, such focused extraction should be easier to manage than fishing gears that catch seahorses incidentally - like bottom trawls. For targeted fisheries we can introduce minimum size limits, implement daily quotas on catch and improve marine protected area enforcement.
We are striving to constrain rampant seahorse smuggling in many areas of the globe. Project Seahorse has already revealed that the vast majority of seahorse trade has gone underground and is illegal, unregulated or unreported. We are, therefore, delighted by new progress at the most recent Conference of the Parties to CITES (CoP18, August 2019). At that meeting, Parties officially adopted Decisions intended to reduce the scale and impact of the substantial illegal trade and move legal trade of seahorses toward sustainability. This represents a huge step forward for seahorses.

Project Seahorse supported Parties by preparing the briefing to CITES that underpinned the CoP discussions and debates. Dr. Sarah Foster, the lead author on the document, was there to support its introduction and the ensuing debate. It was a joy to find unanimous support for the briefing and its proposed Decisions, with all Parties recognizing challenges but also ways forward. Sarah explained her excitement in a blog posted during the voting process. “Although the document still had to pass plenary to be official, I got quite emotional when it passed in Committee. Surprisingly so. Policy can be so systematic and dry in its execution, one can forget the incredible amounts of hard work, collaboration and passion that underpin it all. In this case, the 10 minutes Document 72 spent on the floor was underpinned by nearly 20 years of effort by Project Seahorse. The document itself was at least two years in the making,” said Sarah. “Because there was unanimous support by the Committee it wasn’t surprising the document also passed in plenary on August 27. But no less exciting. Now the work begins - as with all agreements, it is implementation that will make the difference.”

Our results should help guide development and implementation of a Philippines’ management plan, directed at legal and responsible seahorse fisheries and trade, secured by monitoring and adaptive management. We will continue to assist and support the Philippines government to act for enduring wild populations of seahorses.

New hope for seahorse conservation 18 years after CITES listing

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One joy of being Chair of the SSC Marine Conservation Committee is the chance to consult and collaborate with hugely talented leaders who work on marine issues,” says our director, Prof. Amanda Vincent, who serves as Chair of the IUCN’s coordinating group on marine species. The Species Survival Commission (SSC) is one of the IUCN’s six commissions of experts that drive its work forward.

The Marine Conservation Committee (MCC) supports, connects and promotes expertise in marine species conservation across the SSC, the IUCN and beyond. It assists 32 taxon and disciplinary Specialist Groups, Stand Alone Red List Authorities and Task Forces with marine interests. The MCC also works across IUCN marine commissions and in the broader global conservation community.

As Chair, Amanda has backed numerous marine conservationists, facilitated connections among people working across the breadth of marine conservation, and enthusiastically promoted action on myriad ocean issues. In 2019, the MCC supported and enhanced SSC marine expertise by consulting and collaborating widely, compiling a list of priority marine species, developing Events and Motions for IUCN action on marine species, and informing new Global Biodiversity Targets. www.IUCN-SSCmarine.org
Milestones

CONGRATULATIONS DR. XIONG ZHANG

Xiong earned his PhD in early 2019 with an outstanding thesis on Conservation prioritization and ecology of data-poor marine species under human pressures. He was then awarded a postdoctoral Fellowship with UBC’s Ocean Leaders programme to continue working with Amanda Vincent, now on the challenges of managing bottom trawling - a major threat to thousands of marine species including seahorses and sharks.

WELCOME ROSHNI AND ADAM

This year we welcomed two new Masters students to our team based in Vancouver – Adam Hicks, from the UK, and Roshni Mangar, from Mauritius. Adam will focus on the effects of the international wildlife trade and species bycatch on seahorses in South-East Asia, while Roshni will explore the socio-economic aspects of bottom trawling in India.

WORKLEARN STUDENTS HELP ADVANCE FISHERIES RESEARCH

During the summer, two students (with UBC Work Learn International Undergraduate Research Awards) made valuable contributions to our conservation research. Anna Madsen compiled information on perverse and ambiguous subsidies from governments, which use public funds to support persistence of bad fishing practices. Jeff Sha assisted Xiong Zhang in an extensive literature review of China’s bottom trawling policies, in both English and Mandarin, with the aim of reining in these damaging forms of exploitation.

CONSERVATION OUTREACH TOOLKITS

We continue to create our useful outreach toolkits in collaboration with IUCN SSC Seahorse, Pipefish and Seadragon Specialist Group members. The toolkits are an array of resources for like-minded groups to use in education and community programming, and when engaging with policy-makers. We have also created a toolkit to help CITES Authorities implement the Appendix II listing of seahorses and overcome challenges to ensuring that wild seahorse populations are sustainable. See our toolkits at www.projectseahorse.org/conservation-tools

SOCIAL MEDIA METRICS @PROJECTSEAHORSE

Twitter: @projectseahorse 6779 followers (20K+ impressions/month), @AmandaVincent1 4217, and @HeatherKoldewey 4998 followers

Instagram: 4714 followers

Facebook: 8764 followers (~7000+ likes / week)


For a complete listing of our publications visit www.projectseahorse.org/research-publications

For our blogs visit www.projectseahorse.org/blog

The first photograph taken in the wild of the Patagonian seahorse (Hippocampus patagonicus). Photo by Amanda Vincent/Project Seahorse
Partners & donors

OUR HOME INSTITUTIONS

The University of British Columbia hosts much of the team. Director and co-founder Dr. Amanda Vincent is a Professor in the Institute for the Oceans and Fisheries.

www.oceans.ubc.ca

The Zoological Society of London is our other home base. Dr. Heather Koldewey, Project Seahorse co-founder, is a Senior Technical Advisor at ZSL.

www.zsl.org

OUR MAJOR PARTNER

Guylian Belgian Chocolates has been our major sustaining partner and sponsor for 20+ years, providing extraordinary support for our conservation research and management projects around the world. Indeed, Guylian’s commitment to marine conservation is matched only by the excellence of its delicious chocolates.

www.guylian.com

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The Paul G. Allen Family Foundation
And many more around the world...

Our sincere thanks to our donors & partners for their ongoing support of our work to advance marine conservation. Together we will save seahorses, and the seas.

For past and present partners and donors see www.projectseahorse.org/partners-collaborators

Special thanks to an anonymous donor who for many years provided essential support to Project Seahorse. Thank you also to our volunteers and interns around the world for their enthusiastic dedication.