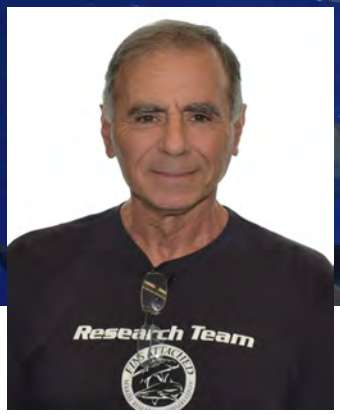
FINS ATTACHED
MARINE RESEARCH & CONSERVATION

2025 Year in Review

Fins Attached Creed

1. We believe the ocean is not a resource to be exploited, but a living system to be protected.
2. We believe sharks are not villains, but vital guardians of balance.
3. We believe science must guide conservation, and action must follow knowledge.
4. We believe that protecting sharks, rays, sea turtles, and critical marine ecosystems is not optional — it is essential for the future of our planet.
5. We believe in courage — the courage to challenge destructive policies, to stand up for endangered species, and to speak for those without a voice.
6. We believe in collaboration — that governments, scientists, communities, and supporters must work together to defend our blue planet.
7. We believe that education ignites stewardship.
8. We believe that one expedition can change policy.
9. One tag can reveal a nursery.
10. One protected area can restore an ecosystem.
11. One committed person can spark a movement.
12. We believe hope is a strategy — but only when paired with action.

We are divers.
We are researchers.
We are advocates.
We are protectors.
We are Fins Attached.
And we will not turn away from the ocean that sustains us all.



A WORD FROM FOUNDER AND CEO - Alex Antoniou, Ph.D

The power of vision.

Vision is one of the most powerful forces we have. It shapes not only what we see, but how we act. Vision is not just about dreaming—it's about seeing the future so clearly that it begins to pull us toward it. In moments of uncertainty, vision becomes our compass. When the path forward is hard, it reminds us why we started.

Where your mind is, so will your heart follow.
What you focus on each day becomes what you care about most. If your attention is fixed on fear, your energy shrinks. But if your mind is anchored in possibility, purpose, and hope, your heart follows—and suddenly, your work carries meaning far beyond yourself. Focus is a choice. Choose wisely, because it shapes what you fight for and what you protect.

Progress doesn't come from having all the answers. It comes from asking the right questions. Instead of asking, "Why do people fail?" we should ask, "How do we empower people so they don't drop the ball?" When we ask better questions, we stop assigning blame and start building systems that help people succeed. The right questions turn obstacles into opportunities.

As we step into a new year, I want to offer a resolution—one you must keep.
Commit to showing up. Not just when it's exciting, but when it's difficult. Not just when the results are immediate, but when progress feels slow. Real change doesn't happen in moments of inspiration alone; it happens when commitment outlasts motivation.

And when you face opposition—use it.
Every headwind can become a force for lift. Resistance isn't a sign that you're going the wrong way; often, it's proof that you're moving forward. What pushes against you can sharpen your purpose, strengthen your resolve, and propel you higher than calm conditions ever could.

So I'll leave you with this question: What do you wish for this planet? Not just what you hope for—but what you are willing to work for. Imagine a world where ecosystems are protected, communities are empowered, and future generations inherit opportunity instead of regret. What is your vision for Earth?

Because vision is not passive. It asks something of us. And when we choose to answer that call, we don't just imagine a better future—we begin to create it.

I wish you all a happy and prosperous 2026.

Organizational Overview

Founded in 2010 by shark scientist Dr. Alex Antoniou, Fins Attached operates at the intersection of science, conservation, and community empowerment. What began as shark research has grown into a globally engaged marine conservation organization working with universities, governments, and coastal communities to protect sharks, rays, sea turtles, and critical ocean ecosystems.

What We Do

About Us

Our Mission
To conduct research, promote conservation, and provide education for the protection of the marine ecosystem.

We believe in the preservation of our world's precious resources and that through the protection of the ocean's apex predators, marine ecosystem balance can be maintained for the benefit of all living things on Earth.

Fins Attached is a USA based 501(c)(3) nonprofit
EIN: 27-3567356

Research

It is important to not only understand shark migratory patterns, but to also identify nursery areas where sharks go to give birth. Marine protected areas (MPAs) must be established to protect these nursery areas so that the young sharks have a chance of surviving to adulthood.

Conservation

We must act now! Sharks are exploited for their meat, fins, cartilage, leather, oil, teeth, gill rakers and jaws. They are directly targeted in some commercial and recreational fisheries and are caught incidentally as bycatch in many other fisheries. Fisheries are a major factor affecting shark populations.

Education

Education is essential so that individuals can make informed decisions about the nature and value of sharks and other endangered marine animals.

Areas of Focus

Marine Research

In 2025, Fins Attached conducted long-term shark and ray population studies across the Eastern Tropical Pacific, deploying satellite and acoustic tags to better understand migration, nursery areas, and reproductive behavior. Research also included sea turtle monitoring, genetic sampling, and manta ray morphometric studies in some of the world's most important marine protected areas.

Conservation Action

Our conservation efforts focused on safeguarding critical habitats from Cocos Island to Costa Rica's Osa Peninsula. Through nesting beach protection, hatchery operations, and fisheries engagement, we translated science into action—protecting vulnerable species during their most critical life stages.

Education & Community Engagement

Fins Attached expanded youth education programs in Colorado and Latin America while training local community members as conservation stewards. We also elevated science-based advocacy on the global stage through participation in CITES CoP20 and UN ocean protection initiatives, ensuring research informed policy.

Fins Attached Board Members


Kris Lopez

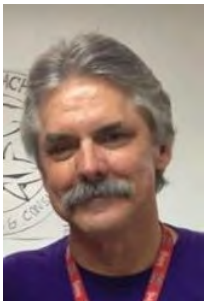

Kevin Young


Andy Reid


Dennis Santos


Ali Miller


Tamara Glover


Pat Purkhiser

Advisory Board Members


Christopher St. John


Amy Tyson


Dr. James Sulikowski


Dr. Mauricio Hoyos

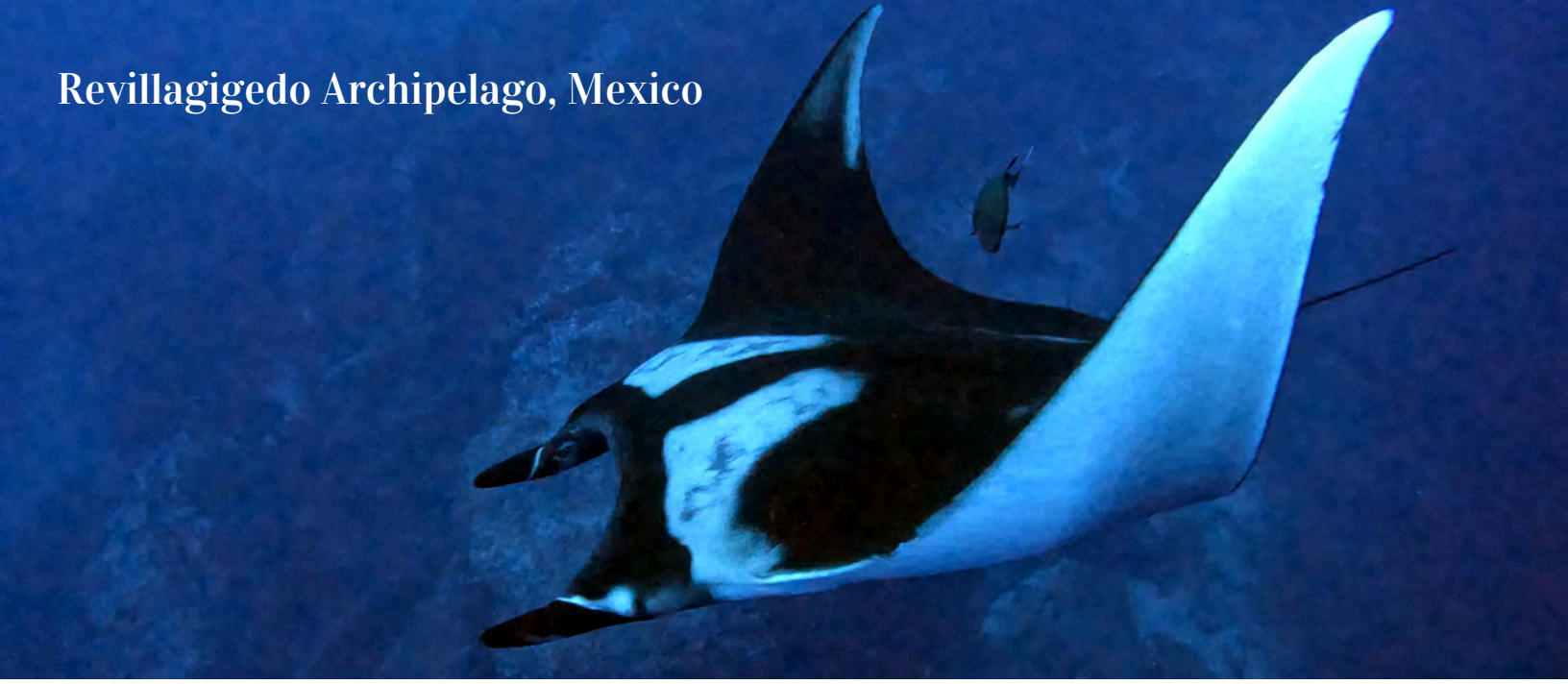

Mike Lloyd

Program Impact

With general operating support, Fins Attached has achieved measurable global impact:

- Sharks tagged, contributing to major scientific publications and policy reforms.
- Discovery of new shark nursery areas, guiding protections in Mexico and the Eastern Tropical Pacific.
- Tens of thousands of sea turtle hatchlings released through our Costa Rica nesting beach program.
- Youth environmental programs reaching students in Colorado and around the world. This includes two Fins Attached Youth Shark Ambassadors as part of the CITES Youth Initiative and attendance at the CITES CoP20 in Uzbekistan.

Our work directly contributes to the long-term health of marine ecosystems, local livelihoods, and global biodiversity.



Two Expeditions

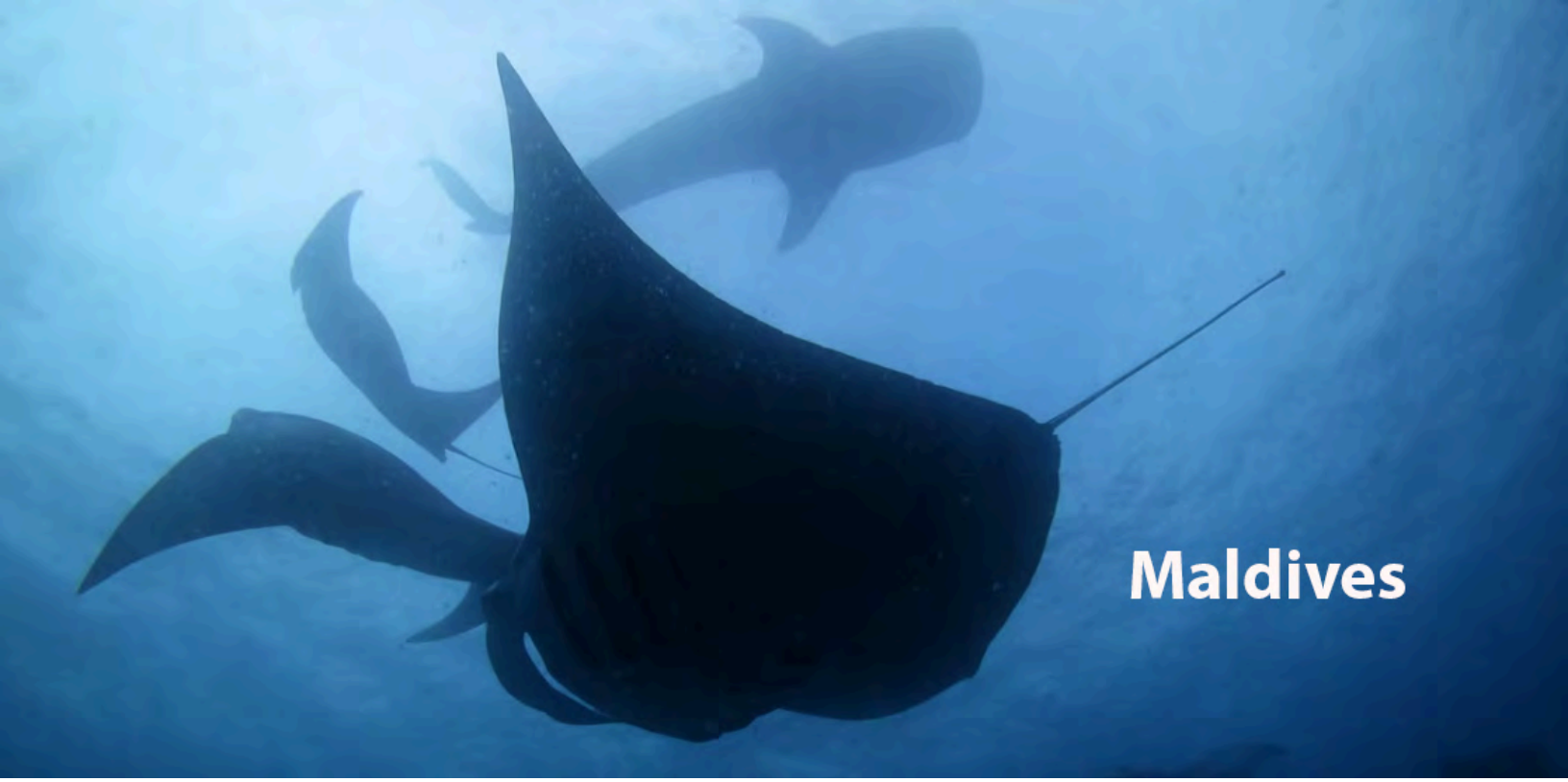
- February 17–25, 2025
- April 26 - May 4, 2025
- Researchers: Dr. Mauricio Hoyos, MSc Jane Vinesky, MSc Irene Casanova, Dr. Alex Antoniou

Objectives

- Manta rays were identified via photo-identification, and images were captured with laser points projected on their dorsum (back). The images were later analyzed using photogrammetric software to obtain accurate wingspan measurements.
- A key defense mechanism of manta rays against pathogens is their surface mucus, a viscous layer that acts as a physical and chemical barrier against bacteria, fungi, and parasites.
- Mucus samples were obtained across all islands in the archipelago. Laser-derived morphometric measurements were completed. A complete sampling protocol (comprising two dorsal and two ventral mucus samples) was achieved for mantas.

Results

The use of laser systems for measuring giant manta rays in the Revillagigedo Archipelago proved to be an effective, accurate, and non-invasive method. This methodology supports the creation of a robust database for monitoring this vulnerable species and informing long-term conservation strategies. The mucus samples will be analyzed for hormon stress levels and pollutants. This scientific basis helps establish responsible tourism guidelines that improve visitor behavior.



March 30 – April 14, 2025
Exploring the Maldives: An Educational Expedition with Fins Attached and The Manta Trust

In March/April, 2025, Fins Attached lead an immersive educational expedition to the Maldives—one of the most biologically rich marine environments on the planet, to study sharks, rays, and the fragile ecosystems they call home. In partnership with The Manta Trust, this journey offers students, early-career researchers, and passionate ocean advocates a rare chance to experience frontline marine science in action.

Over the course of the expedition, participants joined expert researchers as they explore vibrant coral reefs, manta cleaning stations, and known shark aggregation sites. Each day began with a briefing on local ecology, conservation challenges, and the species expected to be observed. From there, the team heads into the field, diving or snorkeling alongside some of the ocean's most iconic animals, including reef mantas, whale sharks, blacktip reef sharks, and stingrays. Each day concluded with educational presentations from Fins Attached and the Manta Trust.

Manta TRUST

FINS ATTACHED MARINE RESEARCH & CONSERVATION

Shark Nurseries: The Holy Grail of Shark Conservation

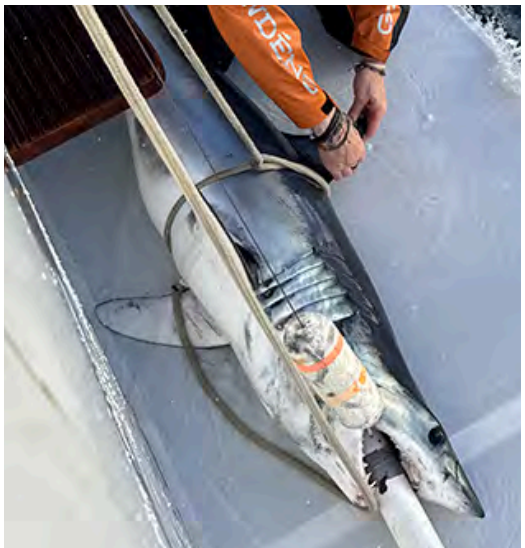
Painting by Rocio Perez

White shark nurseries are critical habitats where juvenile great white sharks (Carcharodon carcharias) are born and spend their early years before venturing into deeper waters. These nurseries provide essential protection from larger predators and offer an abundant food supply, ensuring young sharks have the best chance of survival.

Fins Attached is actively involved in locating and studying white shark nurseries, particularly in Mexico. Through tagging programs and genetic studies, researchers aim to understand migration patterns, growth rates, and the environmental conditions necessary for these nurseries to thrive. Protecting these areas through marine protected zones and policy advocacy is a key focus for ensuring the future of this iconic species.

By safeguarding white shark nurseries, we contribute to the long-term survival of one of the ocean's most important predators, ensuring they continue to fulfill their ecological role for generations to come.

The soconds expeditios was conducted in January 2025. Although we were not able to catch and tag a pregnant white shark, we were able to tag an adult and mature male mako shark. Tracking this shark has been very interesting. See the track below.



Mako Shark Track

2025 Nesting Season Update: Isla Damas, Quepos, Costa Rica

Project Overview
The Isla Damas initiative focuses on protecting sea turtle nests from poaching, predation, and tidal loss, while building long-term community-based stewardship. Activities include nightly patrols, hatchery management, relocation of at-risk nests, data collection, and community engagement.

2025 Was a Very Strong Year
Record-level success — Both the number of eggs protected and the percentage that hatched was exceptionally high for 2025.

Data from January to December 2025

- Number of nests in the hatchery = 493
- Total number of eggs = 45,387
  - Nests purchased from poachers = 339 = 31,527 eggs
  - Nests rescued by Milo (project manager) = 154 = 13,860 eggs
  - Total number of turtle hatchlings released = 42,809
  - 94% hatch rate
  - 12 still in the hatchery at the end of 2025 = 827 eggs

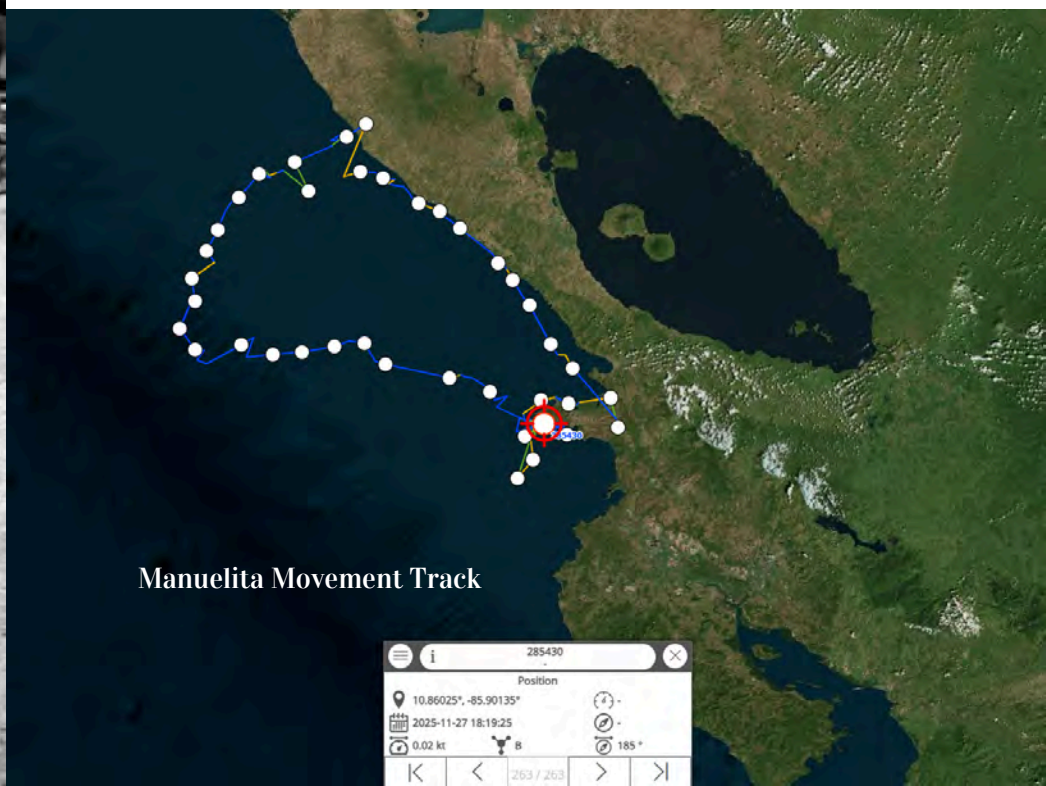
The Isla Damas project demonstrates measurable progress driven by constant field presence, strengthened community relationships, and a practical approach to reducing poaching through collaboration rather than conflict. Fins Attached is building a replicable model that protects sea turtles while uplifting local communities, ensuring a healthier future for the species and the region.

Green Turtle Satellite Tagging

A Green Sea Turtle, named Manuelita, was tagged with a satellite tag on October 29, 2025, at 20:00 on San Jose Island, Murciélago Islands Archipelago, Santa Rosa national park Costa Rica. Her shell length was 82.5 cm, with a width of 75.2 cm.

The tag was a Lotek, K2G 376E KIWISAT 202B. Every time Manuelita surfaces, the tag transmits to an Argos satellite, providing the tracking data.

The tagging was accomplished by Coalition Partner, Oscar Brenes, of Reserva Playa Tortuga, and his team. Fins Attached provided the tag.



Manuelita Movement Track

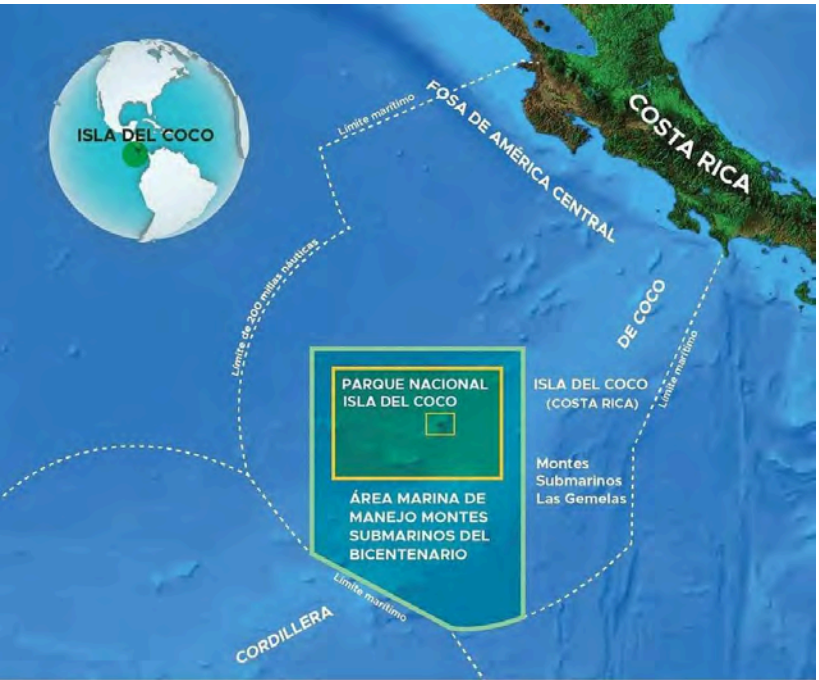
The Cocos to Osa Peninsula Swim-Way

Photo by Mike Lloyd

Marine Protected Areas (MPAs) are a key conservation strategy for all countries in their marine territories and for areas beyond national jurisdiction. Scientific studies show that highly migratory species such as sharks, rays, sea turtles, tuna, swordfish, billfish, dorado, and whales are safe in existing MPAs

However, once they leave the MPAs they face significant threats from commercial fisheries. Up until now, the focus of research activities has been on the Cocos Island National Park to the Galapagos Marine Preserve corridor, which has documented the migration of sharks between the two MPAs. In the eastern Pacific the Cocos Ridge extends southwestward from the Central American isthmus to the Galapagos Islands.

One Ocean Worldwide Coalition (OOWC) is proposing a research project that extends the study area to include the Cocos-Osa Swim-Way. The goal of this project is to obtain scientific information to propose to decision makers the level of protection required to reduce fishery-related mortality and improved management schemes for the Cocos-Osa Swim-Way.



This project is ongoing, with expeditions planned for 2026.

Data Recorded

For each shark, the following data were collected when possible: Estimated size, sex (when visible), sampling site, depth, environmental conditions (visibility, temperature), behavioral response to sampling.

Results

A total of two whitetip reef sharks were successfully biopsied:

Shark 1 – Whitetip Reef Shark (*Triaenodon obesus*)

- Tissue biopsy collected from dorsal musculature
- The shark exhibited minimal reaction and swam calmly after sampling
- The individual remained in close proximity, indicating low disturbance

Shark 2 – Whitetip Reef Shark (*Triaenodon obesus*)

- Sample obtained using a pole-mounted biopsy method
- The shark showed no abrupt flight response and continued normal resting/swimming behavior
- High-quality tissue samples were preserved successfully

Discussion

The whitetip reef sharks at Caño Island are known for their tolerance to divers due to frequent exposure in this protected area. This behavioral trait greatly facilitated safe, close-range sampling. The success of both biopsy events reinforces the reliability of Caño Island as a research location for minimally invasive shark tissue collection. The samples collected will be used in studies related to: genetic diversity, population structure, connectivity among ETP marine protected areas, Long-term conservation monitoring. Given the importance of whitetip reef sharks as a resident reef predator, genetic information from Caño Island contributes to broader efforts to understand ecosystem dynamics and human impacts across the region.

Cocos Island September 20-30, 2025 Research Expedition

Using diver-deployed acoustic transmitters, the team recorded biological information, environmental conditions, and tagging details to support long-term monitoring of shark movements and habitat use. The data collected provide valuable insight into the presence of whale sharks, Galapagos sharks, and scalloped hammerheads at key aggregation sites around the island.

Data Collection

A total of four sharks were tagged during the expedition (All individuals were females).

- Whale Shark: 23 September 2025
  - Size: ~7 m
  - Depth: 15 ft
- Galapagos Shark: 23 September 2025
  - Size: 1.80 m
  - Depth: 65 ft
- Scalloped Hammerhead: 26 September 2025
  - Size: 1.90 m
  - Depth: 65 ft
- Galapagos Shark: 27 September 2025
  - Size: ~3 m
  - Depth: 123 ft

Conclusions

The Cocos Island expedition successfully tagged four sharks using diver-deployed acoustic transmitters. The data collected provides valuable baseline information on species presence and behavior and will support future analyses of regional shark movements and conservation planning.

Dr. Mauricio Hoyos

During the 2025 Cocos Island research expedition, Fins Attached chief scientist, Dr. Mauricio Hoyos, was bitten by a shark. The shark, a Galapagos shark, measuring approximately three meters, bit him on the face and scalp, after he had tagged the shark. The incident occured the day of the Fins Attached Anual Gala in Denver on September 27. Dr. Hoyos was scheduled to receive the **Rob Stewart Ocean Conservationist of the Year Award** from the parents of Rob Stewart, Brian and Sandy, via a Zoom call.

"*Experts emphasize that such events are extremely rare and are often defensive responses rather than predatory attacks. Dr. Hoyos is an extraordinary scientist who has dedicated his career to shark conservation, and we are deeply grateful for the support of the Cocos Island community during that difficult time*," said Alex Antoniou, Executive Director of Fins Attached.

Dr. Hoyos has recovered and has been since given his award, and is now back in the field continuing the field work with sharks.

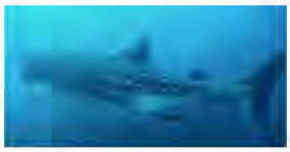
Fins Attached was in attendance at the 2025 CoP20 in Uzbekistan as an observer nonprofit. With the belief that the youth must become engaged in what is happening with our oceans and specifically sharks, two youths representing Fins Attached were present, Elisa Lee and Pari Paribatra.

All major shark and ray proposals were adopted at CoP20, marking a landmark shift in global regulation of shark and ray trade. The most significant adoption was the Appendix I listings (highest protection) of:

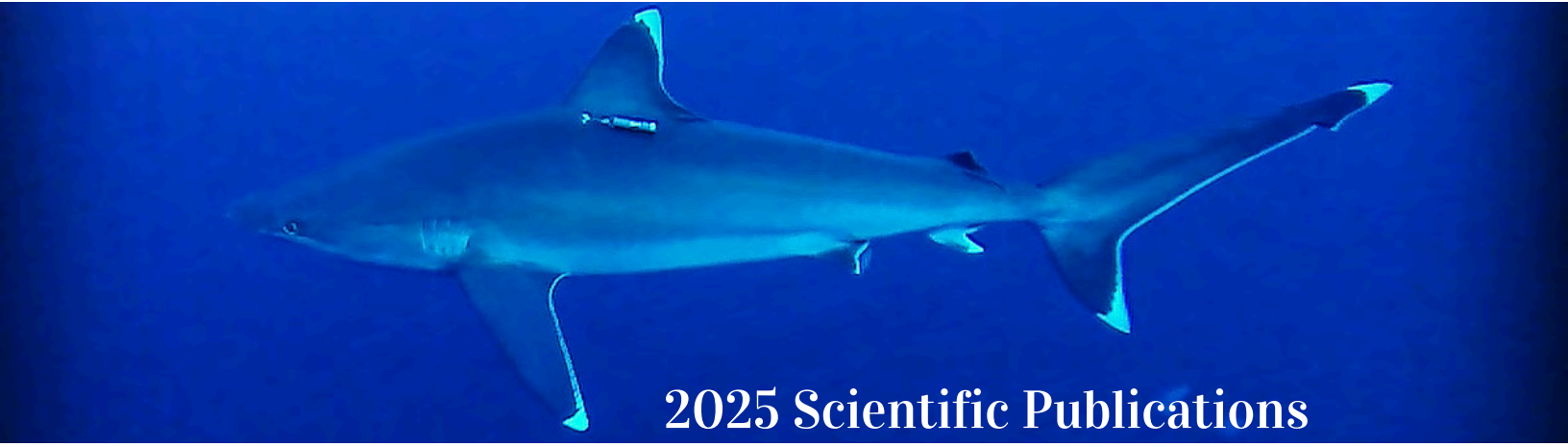
•Oceanic whitetip shark — moved to Appendix I.
•Whale shark — moved to Appendix I.
•Manta and devil rays — moved to Appendix I.

These listings represent the most sweeping shark and ray trade protections ever agreed in Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and were co-sponsored by many governments to align trade controls with scientific assessments of risk.

CITES CoP20 – Shark and Ray Proposals 28–34

Proposal # / Species / Common Name	Appendix Action	Sponsoring Parties	IUCN Status	Summary/Key Points	
Proposal #28 *Carcharhinus longimanus* **- Oceanic whitetip shark**	Uplisting App. II to App. I (ban commercial trade)	Argentina, Bahamas, Brazil, Comoros, Dominican Republic, Ecuador, EU, Fiji, Gabon, Honduras, Lebanon, Oman, Panama, Samoa, Senegal, Seychelles, Sri Lanka, Sudan, Togo, UK	Critically Endangered (global declines >80-90%)	Once-abundant apex predator; now rare; still illegally caught for fins despite national protections.	
Proposal #29 *Galeorhinus galeus* **(Tope/Soupfin) &** *Mustelus spp.* **(Smoothhounds)**	New Appendix II listing (regulate trade)	Brazil, Ecuador, EU, Panama, Senegal	Critically Endangered – Endangered (>80% declines)	Coastal species exploited for meat, fins & oil; unregulated trade; stock collapses documented; urgent family-level control needed.	
Proposal #30 *Mobulidae spp.* **– Manta & Devil Rays**	Uplisting App. II to App. I (ban commercial trade)	Bahamas, Belize, Brazil, Comoros, Dominican Republic, Ecuador, Fiji, Gabon, Jamaica, Maldives, Panama, Samoa, Senegal, Seychelles, Sudan, Togo	Critically Endangered – Endangered (>80% declines)	Targeted for gill-plates; trade unreported & unsustainable; extremely slow reproduction.	
Proposal #31 *Rhincodon typus* **– Whale Shark**	Uplisting App. II to App. I (ban commercial trade)	Argentina, Bahamas, Bangladesh, Belize, Comoros, Dominican Republic, Ecuador, Fiji, Gabon, Maldives, Panama, Philippines, Samoa, Senegal, Seychelles, Sri Lanka, Togo	Endangered (global decline ≈92%)	Largest fish; critical for eco-tourism; still caught for fins, oil & meat; illegal trade continues.	
Proposal #32 *Glaucostegus spp.* **– Giant Guitarfishes**	Zero-export quota (App. II)	Bangladesh, Benin, Brazil, Burkina Faso, Burundi, Cabo Verde, CAR, Comoros, Congo, Gabon, Gambia, Guinea, Guinea-Bissau, Maldives, Mali, Niger, Nigeria, Panama, Sierra Leone, Sudan, Togo	Critically Endangered (80–99% declines)	Overexploited for fins; illegal trade persists; trade halt needed for recovery.	
Proposal #33 *Rhinidae spp.* **– Wedgefishes**	Zero-export quota (App. II)	Bangladesh, Benin, Brazil, Burkina Faso, Burundi, CAR, Comoros, Congo, Gabon, Gambia, Guinea, Guinea-Bissau, Maldives, Mali, Niger, Nigeria, Panama, Senegal, Sierra Leone, Sudan, Togo	Critically Endangered (≥80% declines)	Among most threatened families; valuable fins; zero-export quota allows recovery.	
Proposal #34 *Centrophoridae spp.* **– Deep-sea Gulper Sharks**	New Appendix II listing (regulate trade)	Brazil, Comoros, Dominican Republic, Ecuador, EU, Lebanon, Nigeria, Panama, Senegal, Syrian Arab Republic, UK	Critically Endangered – Endangered (>80% declines)	Deep-sea species with low reproduction; targeted for liver oil (squalene); family level controls needed to prevent species collapse.	

Images supplied by FON and Wikipedia



2025 Scientific Publications

- **Trophic ecology of juvenile smooth hammerhead shark Sphyrna zygaena (Carcharhiniformes: Sphyrnidae) in the central Gulf of California, Mexico**. Mariana Alejandra Vázquez-Liñero, Felipe Galván-Magaña, Arturo Tripp-Valdez, Alberto Sánchez-González, Sergio Alejandro Briones-Hernández, Edgar Mauricio Hoyos-Padilla, Alejandra Piñón-Gimate. Environmental Biology Fish, January 2025.
- **Potential nursery area for the endangered oceanic manta ray in the Gulf of California, México**. Paul A. Preciado-González, Felipe Galván-Magaña, Jame. T. Ketchum, Héctor Villalobos-Ortiz, Rogelio González-Armas, Jesús Erick Higuera-Rivas, Arturo Ayala-Bocos · Paola Ruffo-Ruffo, Georgina Saad-Navarro, Edgar M. Hoyos-Padilla. Environmental Biology Fish, 14 April 2025
- **Global tracking of marine megafauna space use reveals how to achieve conservation targets**. Science, June 2025
- **Electric Rays Defend Themselves From Large Sharks Using Electric Discharge**. Yannis P. Papastamatiou, Sarah Luongo, Ali Ansaar, Christopher G. Lowe, Mauricio Hoyos-Padilla. Ethology, 15 June 2025
- **A genomic test of sex-biased dispersal in white sharks**. Romuald Laso-Jadart, Shannon L. Corrigan Lei Yangc, Szu-Hsuan Leec, Elise J. Gaya, Olivier Fedrigod, Christopher G. Lowe, Gregory Skomal, Geremy Cliff, Mauricio Hoyos-Padilla, Charlie Huveneersj, Kady Lyons, Keiichi Sato, James Glancyl, Pierre Lesturgiea, Stefano Monaa, and Gavin J. P Naylor. Population Biology, July 2025
- **Northernmost record of a leucistic Mobula birostris in the Eastern Tropical Pacific**. Paul A. Preciado-González, Edgar M. Hoyos-Padilla, Jesús Erick Higuera-Rivas. Marine Biodiversity, October 2025
- **Novel evidence of interaction between killer whales (Orcinus orca) and juvenile white sharks (*Carcharodon carcharias*) in the Gulf of California, Mexico**. Jesus Erick Higuera-Rivas, Francesca Pancaldi, Salvador J. Jorgensen, and Edgar Mauricio Hoyos-Padilla. Frontiers in Marine Biology, November, 2025
- **Relative abundance and diversity of sharks and predatory fishes across Marine Protected Areas of the Tropical Eastern Pacific**. Simon J. McKinley, Sarah F. Hansen, Denisse Fierro-Arcos, Megan E. Cundy, Magdalena Mossbrucker, Gabriel M. S. Vianna, Jenifer Suarez-Moncada, Mauricio Hoyos-Padilla, Sandra Bessudo-Lion, Enric Sala, Pelayo Salinas-de-León. PLOS One, November 2025

Thank you to our Key Sponsors

Decon Labs, Inc.

The Peterffy Foundation
Reweaving the Web

RESOLUTE INVESTMENTS, INC

Diventures™

FON
FOCUSED ON NATURE

PAUL M. ANGELL
FAMILY FOUNDATION

DENVER DIVERS & The SWIM SCHOOL of DENVER

a1scuba.com
Since 1959
A-1 Scuba & Travel
Aquatics Center

McWHINNEY

Bennett Raccah Family Trust

Shirley Orman Family Foundation

William H. Nichols Foundation

Chris Law Family Foundation

Andrew Cornelius

Amy and Gary Tyson

Joseph and Barbara Hollander Family Foundation

Painting by Rocio Perez

Fins Attached
5297 Palomino Ranh Point
Colorado Springs, CO 80922
USA

finsattached.org
info@finsattached.org

501(c)(3) Nonprofit: EIN: 27-3567356