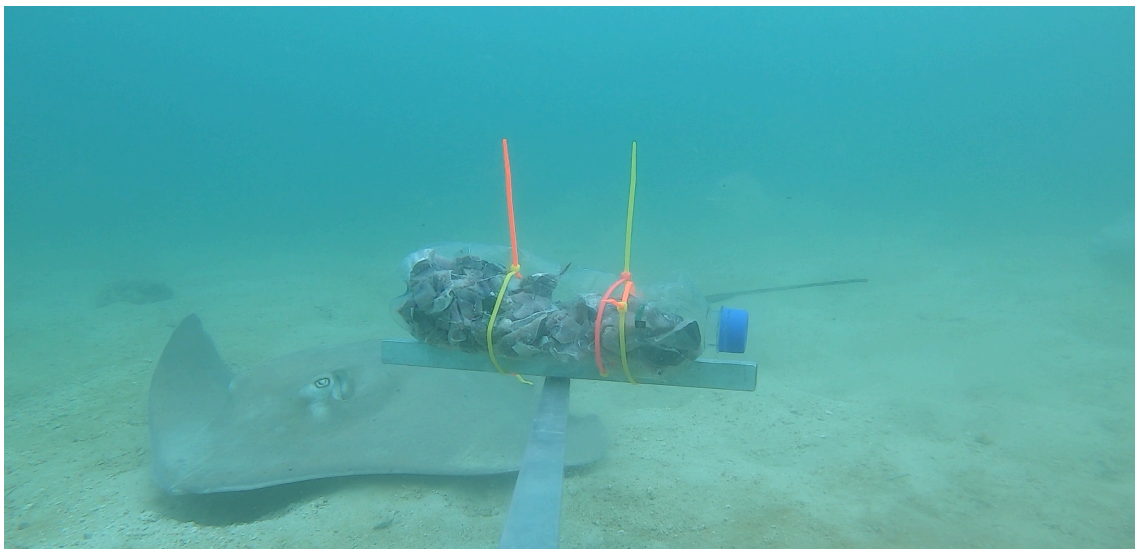




Project update:

Enabling the conservation of endangered chondrichthyans with dependent communities in a Key Biodiversity Hotspot of the Eastern Tropical Pacific
(42529-1)



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1. Project summary:

Las Perlas Archipelago, in the Gulf of Panama, is a globally-recognized biodiversity hotspot, drawing interest both for conservation and socioeconomic reasons. Current knowledge indicates the presence of threatened mobile sharks and rays in the area feeding and/or nursing, including the critically endangered Scalloped hammerhead and large migratory species such as the whale shark. Nonetheless, active threats to this group persist, and there is a lack of essential insight for effective management. This project seeks to enable meaningful conservation actions by providing the first characterization of the chondrichthyan population's ecology using non-invasive, accessible methods, and by integrating local stakeholders in the project with the goal of elevating local capacities and stewardship for the marine environment

2. Project objectives:

- a. To generate at least 80 hours of permanent video records of marine fauna in Las Perlas Archipelago recorded by accessible, robust, and non-invasive baited remote underwater videos.
- b. To provide the first characterization of the abundance, diversity, distribution, and habitat associations of endangered chondrichthyans in Las Perlas Archipelago.
- c. To interpret, consolidate, and deliver the findings to relevant conservation planners and management authorities, including Panama's ministry of environment, and Panama's fisheries authority in the form of technical reports.
- d. To elevate local capacities and engagement in marine research and conservation by actively training and integrating local fisher folk in the development of the project.

3. Development and activities

a. Field preparations:

Starting on 05/10/2024, we initiated logistics and preparations for the start of field work. This included the assemblage of 6 BRUVs units by collaborator Sam Owen, alongside the acquisition of associated kits, such as buoys, weights, cabling and underwater cameras (GoPros).

b. Establishment of a local collaborator network:

In between 05/10/2024 and 18/10/2024, a series of visits were made to Las Perlas Archipelago to establish initial contact with local fisher folk and other relevant stakeholders. Several interested collaborators were identified from fishermen from Saboga (Second most densely populated Island after San Miguel) and were invited for further talks about the possibility of joining the project. From the expressions of interest, three enthusiastic, young fishermen followed up with establishing partnerships and providing support for project execution.

c. Training in scientific monitoring

All three were invited to a training session which was held in Contadora Island on 19/10/2024. This consisted of a half-day practice session for correctly assembling and deploying units on land, which was subsequently followed by two mock deployments in the vicinity of the island.

d. Student recruitment:

Through MarAlliance's local network of collaborators, two interested students were identified from the University of Panama, Ana Sofia Santos, and Jacson Barria, who have now officially joined the project as part of the development of their bachelor's thesis. Ana Sofia will focus on applying statistical methods to BRUVs data to predict spatial abundance/density of threatened elasmobranch fauna across the archipelago, while Jocsan will focus on exploring the spatial and temporal distribution of elasmobranch abundance and diversity and its possible environmental and/or physical drivers.

e. Data collection:

During the 20/10/2024 - 21/10/2024, we made field outings to initiate data collection. 7 deployments were made over the two days along Pacheca and Bartolome, and Contadora Islands. While video recordings are just starting to be processed, quick visual reviews highlighted the presence of longtail stingrays (*Dasyatis longa*), classified as Vulnerable by the IUCN, alongside abundant large predatory fish species. While the field outing were planned to last for ~6 days, video recordings were somewhat compromised by the failure of a camera case and subsequent damage to camera, aggressive attitude by predatory fishes ripping away bait cages, alongside sporadic and heavy swells in certain areas of Pacheca which tumbled two systems mid recording. In the midst of such an occurrence, we thought best to stop sampling and proceed with modifications (eg., acquiring more cameras, getting materials for alternative bait cages such as PVC) before continuing with field sampling.