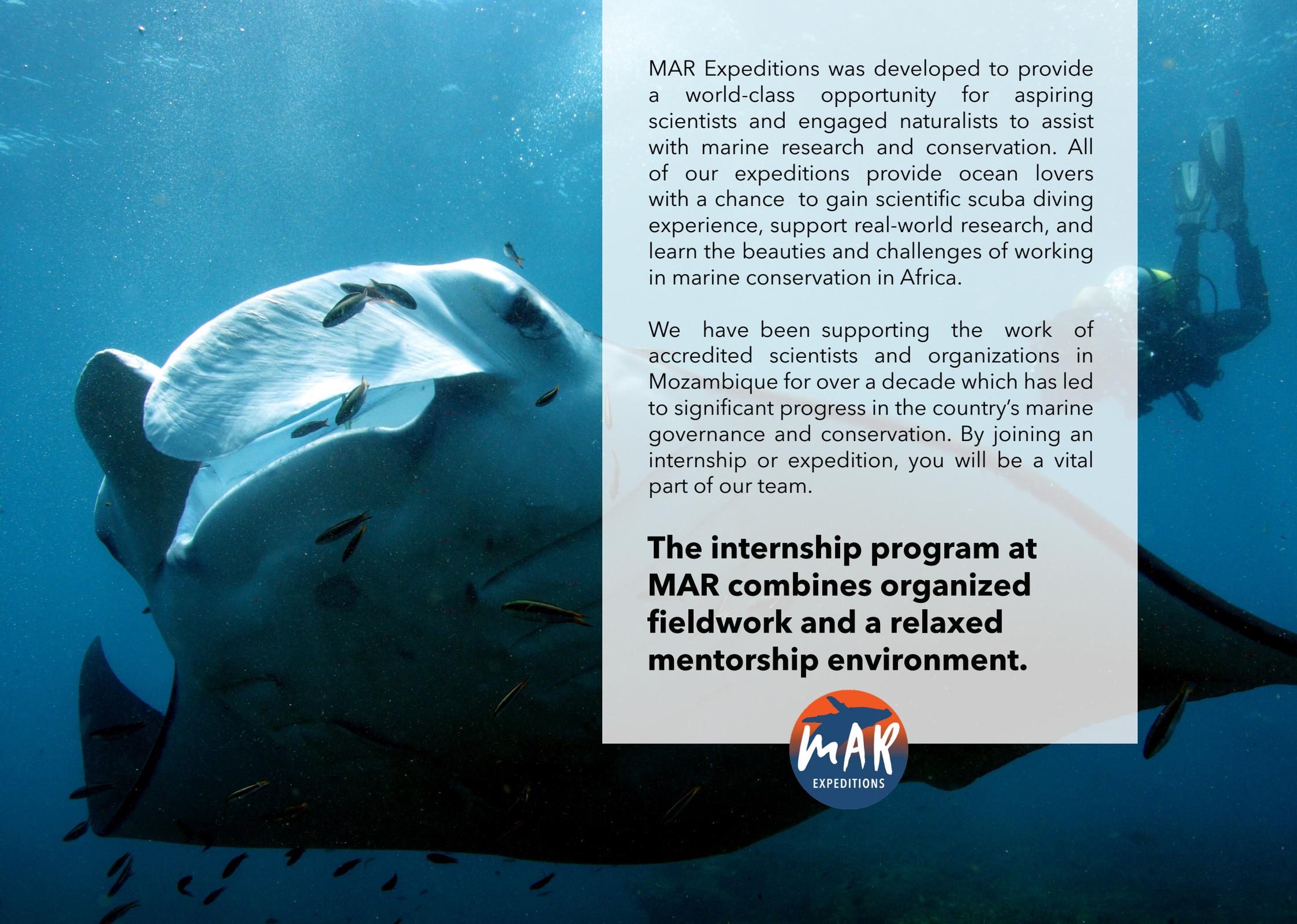




MARINE CONSERVATION RESEARCH INTERNSHIPS 2023

www.marexpeditions.com | info@marexpeditions.com | Praia de Zavora | Mozambique

An underwater photograph featuring a large manta ray swimming in the foreground, its white belly and dark wings visible. In the background, a scuba diver is seen swimming. The water is clear blue with some small fish scattered around.

MAR Expeditions was developed to provide a world-class opportunity for aspiring scientists and engaged naturalists to assist with marine research and conservation. All of our expeditions provide ocean lovers with a chance to gain scientific scuba diving experience, support real-world research, and learn the beauties and challenges of working in marine conservation in Africa.

We have been supporting the work of accredited scientists and organizations in Mozambique for over a decade which has led to significant progress in the country's marine governance and conservation. By joining an internship or expedition, you will be a vital part of our team.

The internship program at MAR combines organized fieldwork and a relaxed mentorship environment.





**ENGAGE IN REAL-WORLD
SCIENCE, IMPROVE
FIELDWORK SKILLS, AND
CONTRIBUTE TO CRITICAL
MARINE RESEARCH IN
SOUTHERN AFRICA.**

INTERNSHIPS

MAR's internship program at the Zavora Marine Lab in Mozambique was developed to provide a world-class opportunity for aspiring scientists and dedicated conservationists to assist with and receive training in marine research and conservation.

Interns gain experience in all aspects of research and experience the challenges and pleasures of working in the most beautiful, wild and remote coastline of southern Mozambique.

Interns' roles include, but are not limited to, collecting underwater and on-land data for any or all of MAR's current research under the supervision of a qualified marine biologist, database entry and analysis,

assisting with science communication and community outreach, and organizing or participating in events for environmental protection.

MAR offers the unique opportunity to explore a marine ecosystem with little human impact and where much of the reef is still yet to be explored. The lab's ongoing projects are focused on manta rays, sharks, humpback whales, nudibranchs, seahorses, and artificial reef (wreck) colonization.



ELIGIBILITY

We accept applications from all types of individuals, from marine biology students to avid divers willing to contribute to science. Our internships and expeditions were designed for anyone who is passionate about marine conservation and wants to learn more about our oceans. Though a background in marine biology is a definite plus, we do not require you to be a scientist to enroll. You will be trained in all our research projects by our head scientist, and will work as a team with our other interns. At least one of our staff members will be present on each of your dives, and will be available to help with all tasks.

Because of the conditions in which we dive, we ask everyone to be at least Advanced Open Water certified. MAR can also assist you in getting certified, should you not be at that level prior to your arrival (not included in the internship cost). Diving in Mozambique is not for the faint of heart. Conditions can be unpredictable, and can include strong currents, high swell and low visibility, sometimes all at once. Please note that diving insurance is mandatory, but don't be put off, diving here is highly rewarding and will leave you in awe more often than not.

In a nutshell, we welcome candidates from all walks of life, as long they are dedicated and passionate about the ocean. Please note however, that our internship places are limited and we may not be able to accommodate your first choice of dates.



EXPECTATIONS & RESPONSIBILITIES

Interns will be joining dedicated scientists who are conducting accredited research critical to Mozambique's marine environment, as well as for science in general. As such, these projects demand a level of dedication from participants. These demands are well within the capabilities of students, and while challenging, are equally enjoyable and exciting.

Interns taking part in MAR's marine biology internship can expect to get practical and theoretical training during the first and second weeks. Interns begin data collection after learning sampling and identification techniques. Research assistance and supervision are provided for the duration of interns' stay, however interns are ultimately expected to work

independently in order to achieve their personal goals, as well as MAR's project aims. Our internship program is an opportunity to contribute meaningfully to exciting marine research and conservation projects, as well as experience the achievements associated with ambitious and challenging marine research in Africa.

INTERN TASKS

Intern roles include (but are not limited to):

- Underwater photo identification of manta rays
- Underwater sizing of manta rays using underwater parallel lasers
- Nudibranch searches per time & quadrats
- BRUV deployment and retrieval
- BRUV footage analysis
- Photo quadrats at the Rio Saiñas wreck
- Fish surveys
- Humpback whale land based surveys (June to October)
- Humpback whale fluke-ID
- Seahorse Monitoring Program (monthly data collection and entry)
- Underwater photo identification of sea turtles
- Turtle patrolling and monitoring (during nesting season - November to March)
- Photo-ID of sharks and rays
- Daily physical conditions data collection
- Reef surveys
- Field research organization
- Data entry - using Excel, Manta ID and Identification Guides
- Conservation activities including:
 - Public talks
 - Fundraising campaigns
 - Beach clean-ups
 - Underwater clean-ups
 - Workshops (e.g. recycling)





2023 INTERNSHIP FEES

The cost of your internship covers most of your living expenses while in Zavora and helps us with the day to day expenses of the Lab. If you would like to discuss specific requirements for your project or dissertation, please get in touch.

2 WEEKS.....	US\$ 1,695
4 WEEKS.....	US\$ 2,695
6 WEEKS.....	US\$ 3,595
8 WEEKS.....	US\$ 4,295
10 WEEKS.....	US\$ 4,795
12 WEEKS.....	US\$ 5,395

To apply please fill out the Internship [application form](#) and send it with your CV to info@marexpeditions.com



WHAT'S INCLUDED?

- All research dives (~25 per month) including equipment rental (excl. dive computers)
- Exclusive dive sites led by experienced researchers
- Return transfer between Inhambane (or Inharrime) & Zavora
- Shared accommodation at the Lab with bed sheets, pillows, and mosquito net provided
- Utility costs while at the Lab (gas, electricity, running water, cleaning, laundry)
- Transport to Inharrime every 2 weeks to buy food supplies
- Seahorse Expedition (2 days/1 night at the Barra Lagoon)
- Research training and assistance
- Authentic community experience
- 24/7 local support in case of an emergency
- Pre-departure assistance

WHAT'S EXCLUDED?

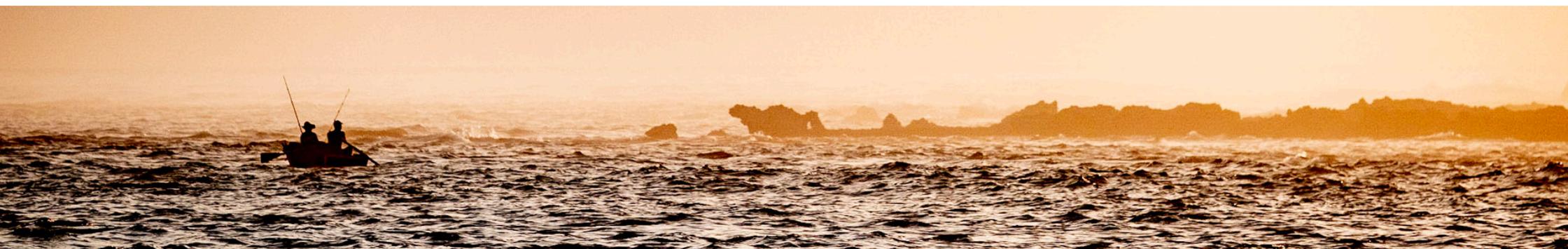
- Dive certifications although we are happy to arrange these for you!
- Return flights from country of origin to Mozambique
- Visa expenses
- Internet (our staff will gladly assist you in getting a SIM card with data upon arrival)
- Drinks and meals
- Antimalarial medication
- Travel & diving insurance (required)

WHEN TO COME

When to come depends on a number factors. As far as we are concerned, there is no “best time to come,” all seasons have their pros and cons, so here are some facts to take into account.

Mozambique is located in the Southern hemisphere, so our summer months (wet season) run from November to April and winter (dry season) from May to October. Please keep in mind that Mozambique is prone to tropical cyclones from December to March, which can sometimes be destructive and prevent us from diving. Water temperature in the winter ranges from 20-23 degrees (C), and in the summer from 26-28 degrees (C).

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Season	Summer			Winter						Summer		
Day temp. (C)	31	31	30	29	27	26	25	26	26	28	29	30
Night temp. (C)	23	23	22	20	18	16	16	16	18	19	21	22
Day temp. (F)	88	88	86	84	81	79	77	79	79	82	84	86
Night temp. (F)	73	73	72	68	64	61	61	61	64	66	70	72



MEGAFUNA PEAK SEASONS

Some of our projects are seasonal, as not all our megafauna are permanent residents of our waters. The charismatic humpback whales, for instance, only spend the winter months in Zavora, to reproduce and give birth. Other species are seen year round but aggregate more (i.e. manta rays) or nest (i.e. turtles) seasonally. Please use the table below, showing our peak seasons, if you hope to encounter a particular species

Please note that these are just indications and seasons are variable due to factors outside of our control. Some species might not be around during your stay even if you come during peak season, or they might arrive or depart before or after the usual season.

Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
											
											
											





OUR PROJECTS

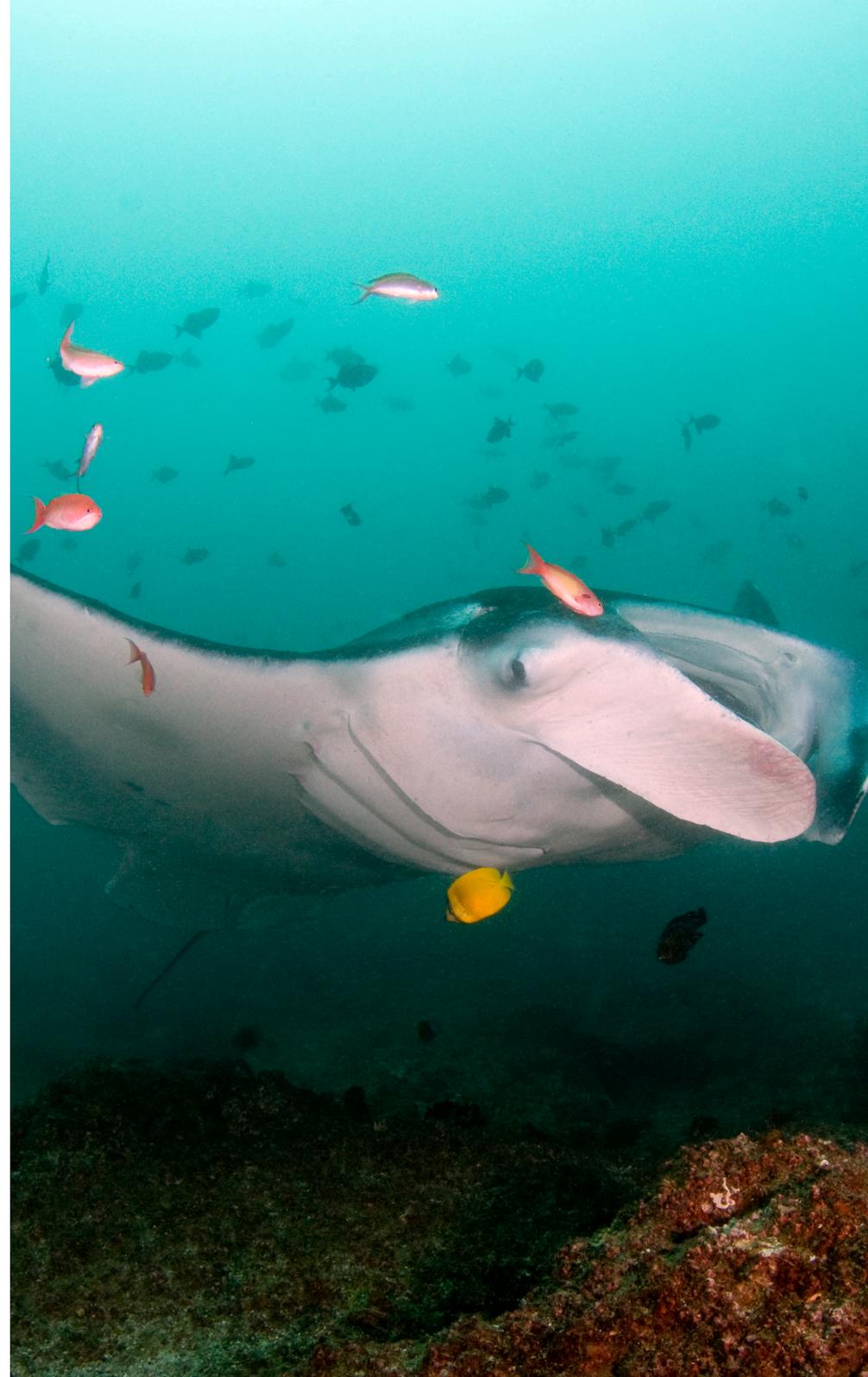
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MANTA RAY POPULATION MONITORING

ALL YEAR ROUND, PEAK SEASON JULY TO NOVEMBER

Manta rays are the largest rays in the world and are currently divided into two different species, the giant manta (*Mobula birostris*) and reef manta (*Mobula alfredi*). In Zavora, both species can be seen all year round, however *M. alfredi* is the most abundant. Despite frequent sightings, little is known about our manta population in Zavora, and this is where you can help us!

Manta rays have a unique spot pattern on their belly, similar to a fingerprint, which makes it possible for us to accurately identify individuals with photo IDs. During dives, we try to take as many photo IDs as possible in order to study our population abundance, structure and behaviour. Back at the lab, we sort through our footage and input our photo IDs into our manta database (manta matching!). This database helps us to monitor our population and track resight frequency. We also collaborate with Marine Megafauna Foundation (MMF) and Mantamatcher, which is a global manta database. You will be trained in taking successful photo IDs and identifying individuals by matching them within our database. You will also learn all about telemetry and get to watch tagging take place in the field.





NUDIBRANCH DIVERSITY & DISTRIBUTION

ALL YEAR ROUND

Sea slugs are one of the most diverse marine invertebrates in the world, with more than 5,000 species described and many still yet to be discovered. Nudibranchs comprise the largest group of sea slugs, well known by divers due to their vibrant colors and amazing camouflage. In the Western Indian Ocean, studies on nudibranchs have been very limited, giving us a unique opportunity to discover and explore new ground. We have been conducting the first study on nudibranchs in Mozambique, looking at diversity, taxonomy and distribution. Our surveys are carried out either on SCUBA on shallow dive sites or snorkelling in our local rock-pool, which is accessible during spring low tides. We employ several techniques to collect our data including searching per time, quadrats and analysis of substrate. So far, more than 230 species have been found in Zavora alone, 90% of which were new records to the country, and more than 30 were completely undescribed to science!

You will receive training in all different data gathering techniques, learn how to spot and successfully identify nudibranchs using a guidebook, and efficiently process the collected data.

HUMPBACK WHALES POPULATION AND BEHAVIOUR

JUNE TO OCTOBER

Humpback whales are some of the most fascinating animals on Earth. Every year, they travel from Antarctica to the Eastern coast of Africa to reproduce and give birth to their calves. Both small and large groups of humpbacks can be easily observed from the boat or shore and are often heard singing underwater. During whale season, we conduct land based whale assessments to estimate the relative abundance of humpback whales using Zavora Bay. Observations are conducted twice a week from 7 am till dark, during which time we collect a variety of data such as estimated group size, behaviour, direction of movement and position. A good day of surveying can generate well over 100 humpback whale sightings, making Zavora one of the busiest hotspots in Eastern Africa (we participate in the East African whale survey once a year).

When possible, we also take identification photos of the fluke (tail) to add to our ongoing humpback whale database. In 2014, we were able to photograph the first record of a newborn whale in the region, which still had its umbilical cord attached.

Should you come during whale season, your training will include how to carry out a land-based surveys, take successful photo IDs and interact with whales above and underwater.





ARTIFICIAL REEF COLONIZATION

ALL YEAR ROUND

On March 11th, 2013, the Rio Saiñas, a 250 ton fishing vessel, which drifted to shore after losing power sank in Závora Bay, just 3 km from shore. This was an excellent opportunity to start a monitoring program to evaluate artificial reef colonization on a clean new wreck in the Indian Ocean. Since then, we have been carrying out a complete survey of its colonization. The growth of marine life has been extremely rapid and the wreck is home to various fish species, including the red listed brindle bass (*Epinephelus lanceolatus*) and catface grouper (*Epinephelus andersoni*). During your time here, you will learn about reef colonization and participate in our substrate photo quadrat and stationary fish census.

PREDATORY FISH SURVEYS

ALL YEAR ROUND

In order to evaluate the health of our reefs, we study the abundance and diversity of predatory fish that inhabit them. Our reefs are populated by a large diversity of groupers, sharks and other benthic and pelagic predatory fishes. While diving, we frequently carry out visual surveys, assessing diversity, abundance and estimated size. When possible, we also deploy a Baited Remote Underwater Video system (BRUV) to get a better understanding of what is happening on our reefs while divers are not around. We will teach you about our local predatory fish species, you will assist our visual surveys and, when applicable, deploy the BRUV and analyse the footage.



SEAHORSE MONITORING

ALL YEAR ROUND

In January 2015, we combined our efforts with the iSeahorse Program to monitor and protect the seahorses of the Barra Lagoon, an estuary located 100 km north of Zavora. The seagrass beds here provide an ideal habitat for various different seahorse species, however their population status is still unknown.

The iSeahorse Monitoring Program is a standardized international program aiming to assess seahorse populations, trends, and threats. Trend data helps to identify seahorse populations that are in need of further research and conservation management, and allows policy-makers and managers to set priorities based on scientific information rather than anecdotal observations. By sharing results, as well as collaborating with and supporting local groups, we can all work to improve the fate of seahorses while engaging more people in ocean conservation.

We travel to Barra once a month to collect seahorse sightings data which contributes to the population trends monitoring program, and can be used globally in their citizen science program.





SEA TURTLE MONITORING

ALL YEAR ROUND FOR PHOTO IDS, NOVEMBER TO MARCH FOR NESTING SEASON

Sea turtles, as well as mantas and whale sharks, have individual patterns on their face that can help identify individuals. Such patterns allow researchers to understand population status and movements. We collect photo-ID photos to contribute to the population assessment of turtles in Mozambique. Sea turtles are abundant here with five of the seven species observed regularly in Mozambican waters. Encounters with loggerhead, hawksbill and green turtles are frequent, whilst the olive ridley is less common. Massive leatherbacks are spotted in Zavora on occasion, particularly from November to March.

November to March is nesting season and interns will participate in night patrols to search for nests along the beach. One might be lucky to see a turtle coming up from the water or hatchlings making their way to sea. Leatherback turtle nests are the most common with the odd loggerhead nest occasionally. Sadly, turtle nesting has declined significantly in Zavora due to poaching so night patrols are crucial in helping to protect the nest and turtle populations in general.



DIVING IN ZAVORA

Our dive sites are untouched subtropical rocky reefs with still so much yet to be explored. Zavora's marine life is extremely rich in mega and macrofauna. Over 250 fish species have been identified to date, and MAR fish assessments have added 17 new species of fish to the records in Mozambique. Our constant discoveries prove that there is still so much yet to be revealed! Macrolife in Zavora is stunning with over 230 species of nudibranchs recorded, 30 of them yet to be described, making it a definite "nudi heaven." Unfortunately, many shark species have gone through a rapid decline, however we still have regular

encounters with a few key species such as the whitetip reef shark, leopard shark, and bull sharks.

Manta rays can be seen all year round but peak season typically goes on from July until November when mantas are seen spending a lot of their time at cleaning stations. Many other batoid species can be seen year round, including eagle rays, blotched fantail rays, and the elusive smalleye stingray. Three sea turtle species are seen regularly on our dives. In our winter months (June to October), humpback whales come to visit, blessing us with daily encounters from the

beach, the boat, and even on SCUBA! Their melodious songs can also be heard continuously underwater, making every dive special. But those are only our key species, numerous others can be frequently seen on dives!

The waters of Southern Mozambique have visibility ranging from 5-30 metres, with an average of 12-15m, and our summer months (November to April) usually experience less turbidity. Offshore reefs usually have better visibility than our inshore shallow reefs. In the summer, water temperatures average 26-28 degrees and in the winter 20-23 degrees.



OUR BASE

You will be staying at the Zavora Marine Lab research station. The research station was built to provide facilities as a field laboratory and housing for interns. The main building houses a conference room and two offices (downstairs), as well as four shared bedrooms (upstairs). You will share a communal kitchen and separate female and male bathrooms with the other interns.

Electricity in Zavora is limited to a few houses and businesses, including the research center. Most of the local community lives under the light of the moon and the Milky Way. Mozambique occasionally

experiences power outages, usually for short periods of time, so you might want to consider bringing an external battery to charge phones or cameras if that happens. Interns are advised to bring at least one adaptor - either European (round two pin) or South African (round three pin) sockets - though the offices are equipped with universal adaptors for laptop, cellphone and camera chargers.

The showers and taps around the Lab use water from the on-site well, which is a bit murky and best not to drink on a regular basis. It is however safe to wash your vegetables, cook or brush your

teeth with, and boil for tea and coffee. Drinking water is provided at the Lab, so remember to take a refillable water bottle with you. The Lab is located a short 10 minute walk from the beach and dive centre, but the waves can be heard crashing at the Lab throughout the day.

Please note that we do not have WiFi at the research center. It will be easier for you to get a SIM card upon arrival in Inhambane, something our staff members will be happy to assist you with. Data connection is fast and reliable for the most part and is inexpensive (1 GB of data costs 100 Mets, about \$1.50).



WHAT TO BRING

- **Your diving certification card(s)**
- **A dive computer**
- **Inflatable Deploy Buoy (SMB)**
- **Diving slate**
- **Travel insurance with diving coverage (we recommend the Divers Alert Network, DAN)**
- A waterproof windbreaker
- A hat
- Fleece or other warm clothes (Zavora can get cold, especially during the winter months)
- Insect repellent
- Sunblock (Reef safe please!)
- We recommend that you bring your own wetsuit, mask, snorkel, and fins. In the summer, a 3mm-

5mm wetsuit is recommended and 5-7mm in winter

- (Head)-torch or flashlight
- Water bottle
- Basic First Aid supplies
- Adapter
- Powerbank (solar)
- Camera
- Your laptop
- Any foods that may be useful/ or difficult to get in Africa (Coffee, quinoa, tofu etc.)

Mozambique does not have a proper waste management system so we ask you to be conscious about your waste. For example, bring

shampoo bars instead of plastic bottles and bamboo toothbrushes.

Products such as batteries (apart from very poor quality in the most common sizes), insect repellents and sunscreen are NOT available. You are therefore advised to bring anything you might need apart from basic food.

Locally, the restaurants and bars accept VISA and there are ATMs in Inharrime and Inhambane.

Bed sheets, towels and mosquito nets are provided.



MAR Expeditions

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[@marexpeditions](https://www.instagram.com/marexpeditions)

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