# MANTA FACTS



Manta rays are elasmobranch fishes. This means they are very close relatives of all other shark and ray species. They have a skeleton made up of cartilage rather than bone.



Manta rays have five pairs of gills, which they use to breath underwater. Mantas must keep moving forward in order to allow oxygen-rich water to flow over their gills. This means they can never completely stop swimming!



#### Mantas have large brains and are intelligent animals.

This is reflected in their curious behaviour, complex social interactions and inquisitive nature.



Female manta rays usually give birth to a single pup following a 12 month pregnancy. At birth, the pups are on average 150 cm in wingspan, and are completely independent of their mother when born.



In 2009, scientists established that there are at least **two distinct species of manta ray;** the oceanic manta (Mobula birostris), and the reef manta (Mobula alfredi). Oceanic mantas can grow to have a wingspan up to seven metres, and spend their lives in deeper waters out in the open ocean. Reef manta rays are smaller, with an average wingspan of three and a half metres. They are often resident to certain reefs and atolls in coastal areas.



Despite being the largest rays in the sea, manta rays feed on some of the ocean's smallest organisms. **They typically feed on zooplankton:** microscopic animals such as copepods, mysid shrimps, and arrow worms. Mantas are known to make seasonal migrations to take advantage of short-lived zooplankton hotspots, and employ several feeding strategies to maximise the amount of zooplankton they can consume.

# GET INVOLVED

Have you photographed a manta in Mexico? Can you remember when you saw it and where?

If so, you can contribute to the global research and conservation of manta rays by submitting your images and sightings to our manta database.

Each submission will receive a reply detailing the history of the manta you encountered. The more information you can provide, the more feedback we can give you!

Visit our website to report a manta mantacaribbeanproject.org/reportanencounter

### **RESPONSIBLE TOURISM**

Are you planning to snorkel or dive with manta rays? The Manta Trust have created a 10-step guide, and short film, to show you how to behave during your excursion, wherever you are in the world. By following this Tourism Code of Conduct, you will avoid disturbing the mantas you encounter. At the same time you will increase your chance of having a life changing encounter with these gentle giants.

Visit SwimWithMantas.org for more information.

### WHO ARE THE MANTA TRUST?

The Manta Trust is a UK and US-registered charity, formed in 2011 to co-ordinate global research and conservation efforts around manta rays. Our vision is a world where manta rays and their relatives thrive within a globally healthy marine ecosystem. The Manta Trust takes a multidisciplinary approach to conservation. We focus on conducting robust research to inform important marine management decisions. With a network of over 20 projects worldwide, we specialise in collaborating with multiple parties to drive conservation as a collective; from NGOs and governments, to businesses and local communities. Finally, we place considerable effort into raising awareness of the threats facing mantas, and educating people about the solutions needed to conserve these animals and the wider underwater world. Conservation through research, education and collaboration - an approach that will allow the Manta Trust to deliver a globally sustainable future for manta rays, their relatives, and the wider marine environment.

> Learn more at mantacaribbeanproject.org or email us at karen@mantatrust.org





Conservation through research and collaboration

### MantaCaribbeanProject.Org

# WHO ARE WE?

Formed in 2013, the Mexican Caribbean Manta Ray Project (MCMRP) is the leading manta research project in Mexico. Based in the northern Yucatan Peninsula, the transition zone of the Gulf of Mexico and the Caribbean Sea, the MCMRP was founded, and is led, by Project Director Karen Fuentes and a team of dedicated volunteers and visiting students from around the world.

The MCMRP research focuses on manta ray population dynamics, aiming to identify and conduct research on this poorly understood population of manta rays, environmental monitoring of foraging grounds and the impacts of marine debris here in the Caribbean Sea. In only five years, the MCMRP have identified over 300 different individual manta rays in the region.

MCMRP is dedicated to taking a multidisciplinary approach to the conservation of manta and mobulid rays, and their habitat in the Caribbean Sea through robust science and research, while raising awareness and providing education to the community and stakeholders.





# **KEY OBJECTIVES**

The objective of this project is to conduct research on and describe the local manta ray population, to promote awareness and education in the local communities through outreach programs, and to provide information that can be used to develop sustainable models for the conservation of this species.

### THE CONSERVATION CHALLENGE

In the last two decades manta and mobula rays have faced increasing threats from both targeted and bycatch fisheries, due in part to a growing trade in Asia for their gill plates.

Manta rays use their gill plates to filter zooplankton from the water. In Traditional Asian Medicine, it is believed these gill plates will filter the body of a variety of ailments when consumed in a tonic. There is no scientific evidence to support this claim. Manta and mobula rays are particularly vulnerable because of their conservative life-history; they grow slowly, mature late in life, and give birth to few offspring. These traits make it very easy to damage entire populations in a relatively short period of time.

## **KEY ACHIEVEMENTS**

### GENERATING CHANGE

Annually, we organize and participate in educational activities including environment festivals, workshops, conferences to all public, tour operators and school talks to encourage **conservation through education** with the local communities in Quintana Roo State.

### MARINE DEBRIS PROJECT

As part of our collaboration with 5 Gyres which began in 2017, we collect and register marine debris samples while conducting manta research around the Yucatan Peninsula Coast. Using the "Manta Trawl" provided by 5 Gyres, we work with visiting students to collect and analyse samples, predominantly plastics, in order to quantify the presence and distribution of marine debris here in the Caribbean Sea. We publish our results in our Marine Debris Report within the Mexican Caribbean Biosphere Reserve.

### MEXICAN CARIBBEAN MANTA DATABASE

In just five years, the MCMRP have identified over 300 different individual manta rays observed in the Caribbean Sea. Additionally, a significant number of new sightings are recorded each season as well as numerous resightings of individuals, providing vital information on manta ray movements and site fidelity patterns.

### COLLABORATIONS

Collaborating with other Global Projects of Mobulids Research and Conservation.

