

MANTA

THE GENTLE GIANTS



Georgina Hayes

PADI SI #411108

BSc Hons. Zoology



TYPES OF MANTA RAY

Giant Oceanic Manta
(*mobula birostris*)



(Jon Hanson, 2005)

Reef Manta Ray
(*mobula alfredi*)



(Bartosz Cieślak, 2009)

GIANT OCEANIC MANTA

(mobula birostris)

Largest type of ray in the world

- From fin to fin 7m and weighing up to 3,000kg

Circumglobal

- Found in tropical, sub-tropical and even temperate waters

Very few predators

- Have an escape speed of 24km/h, Only killer whales and large sharks have the ability to keep up.



(Steve Laycock, 2012)

REEF MANTA RAY (*mobula alfredi*)



(Jaine FRA et al, 2012)

Second largest type of ray

- From fin to fin 5.5m maximum

Found mostly in tropical waters

- Most commonly in the indo-pacific

Found in more costal, shallower habitats

Very similar to giant oceanic mantas - are smaller and have teeth only on the lower jaw

Tail
(Does not sting)

Pectoral Fin
(For movement)

Eye

Gill plates
(filters food)

Mouth
(Consumes plankton)

Cephalic fins
(Guide plankton into mouth)



(Squidtoons.com, 2019)

FEEDING

Manta rays have developed a terminal mouth.

This allows them to take in large amounts of water at a time, both filter feeding out large amounts of plankton for food and taking in oxygen rich water for respiration.

Cephalic fins help aid water flow



(Manta Trust)

CLEANING STATIONS

Cleaning stations are where Manta rays have parasites cleaned off them by cleaner fish.

Manta point near Nusa Penida contains two cleaning stations

They can spend up to 8 hours a day being cleaned by various different fish.



(Georgina Hayes 2019)

MANTA MATING

Mating seems to initiate around full moon – mantas can be seen to make mating trains

The male will attempt to grasp the female pectoral fin – almost always left fin

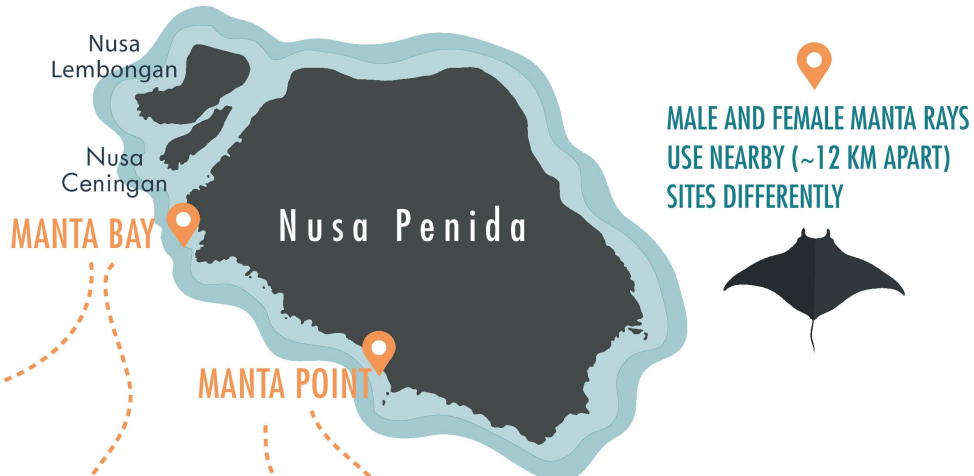
Do not lay eggs, mantas give birth to live young but they are still classed as fish – not mammals.

Gestation period of 12-13 months – no umbilical cord or placenta so buccal pumping by unborn manta is needed



(Manta Trust, 2018)

Reef manta rays within the Nusa Penida Marine Protected Area



♀ POTENTIAL NURSERY AREA
 Juvenile males visit this site repeatedly. Study could not assign immature status to females as maturity indicators are difficult to discern



USED FOR

♀♂ VISITED MOSTLY BY MATURE MALES AND FEMALES

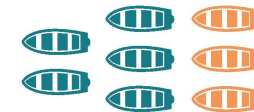


THREATS

1 ARTISANAL FISHERIES
 14% of manta rays trail fishing gear or have permanent injuries

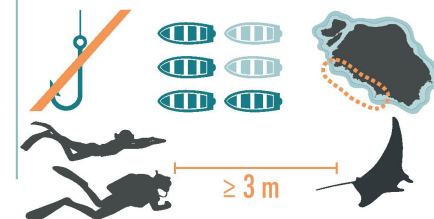


2 UNREGULATED TOURISM
 number of boats on site has increased by 60% from 2012-2017 and is highest during the manta mating season



CONSERVATION

Proposed management actions include: restrictions on fishing and number of tourism boats, seasonal reef closures, diver conduct codes





THREATS




LEAST CONCERN	NEAR THREATENED	< VULNERABLE >	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD
LC	NT	VU	EN	CR	EX

(Manta Trust, 2019... IUCN Red List 2019)

HOW YOU CAN HELP

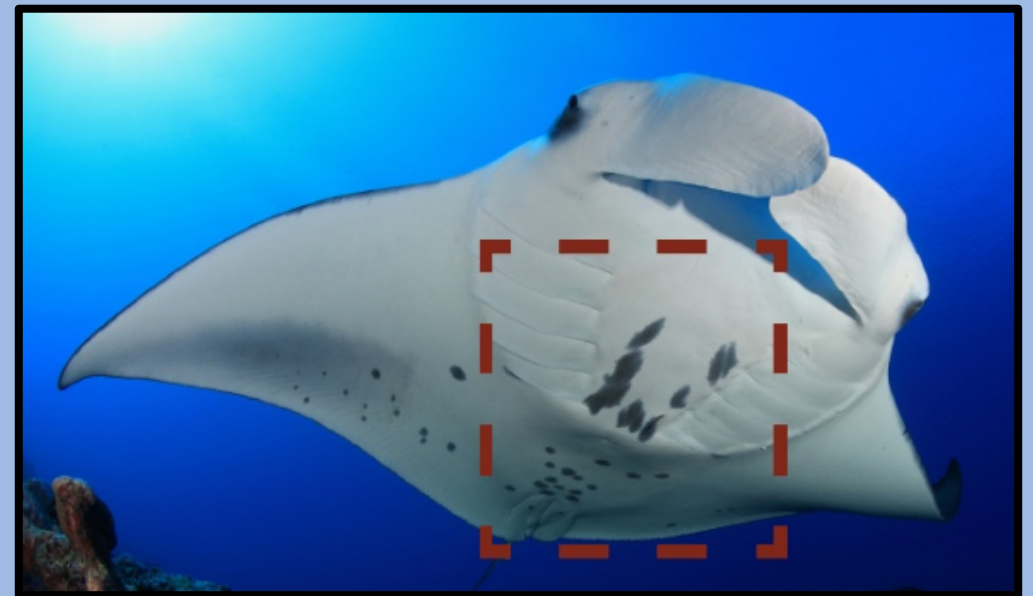
Very little is known about manta ray numbers – labelled as “data deficient”

Public can help by submitting photos of mantas they take to help identify and track existing manta

Every manta has a unique pattern on their underside!

<https://www.mantatrust.org/idthemanta>

<https://www.mantamatcher.org/>



7 STEPS TO MAXIMIZE YOUR MANTA ENCOUNTER

- **LISTEN**- Your guide's briefing helps you enjoy a safer and closer manta encounter
- **WATCH** – Don't touch! Can harm manta by removing protective mucus layer
- **BEHAVE** – in a non threatening manner: do not chase or restrict the manta's normal behaviour and allow a clear swim path
- **POSITION** – yourself on or near the sea floor – they need an open water column to manoeuvre.
- **EXHALE** – Only when the manta are not overhead, the bubbles can startle the manta.
- **PROTECT**- the environment by maintaining good buoyancy and not kicking/knocking the reef. Do not touch or remove wildlife
- **PHOTOGRAPH** – Do not ignore these guidelines to get a good picture, avoid excessive flash.

7 THINGS DIVERS MUST DO



Respect marine life & shoot photos without disturbing the environment

Support conservation & champion Green Fins

Practice buoyancy control & photography skills

Ensure all equipment is secured & do not drag over reefs

Practice advanced finning techniques

Only touch rock or dead coral if necessary

Avoid stirring up sediment by keeping your distance

7 THINGS DIVERS MUST NOT DO X



WANT TO FIND OUT MORE?

- <https://www.mantatrust.org/>
- <https://marinemegafaunafoundation.org/>
- https://en.wikipedia.org/wiki/Reef_manta_ray
- <https://www.mantamatcher.org/>
- <https://www.mantatrust.org/idthemanta>
- <https://marinemegafaunafoundation.org/blog/not-just-another-fish-in-the-sea/>

ANY QUESTIONS?



FOLLOW US ON SOCIAL MEDIA!



facebook.com/ceningandivers



Instagram.com/ceningandivers



ceningandivers.com



+62 821 45855934 (English/French)
+62 822 37599484 (English, French,
Italian, German, Spanish)



Ceningan Divers