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Department of Biodiversity,
Conservation and Attractions

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operation.

other vessels but have specific licence conditions that apply to their Commercial tour operators operate under similar requirements to

- dive flags when swimmers are in the water must display both whale shark (commercial vessels only) and
- when dropping swimmers into the water • should approach from ahead of the shark's direction of travel
  - must not approach closer than 30m to a shark

#### Vessel operators in the aprroach zone:

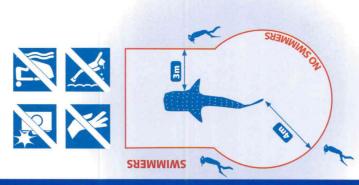
the shark, and any other vessels must be 400m from the shark the second vessel to arrive must keep a distance of 250m from

- the first vessel within that zone is deemed to be 'in contact'
- maximum of 90 minutes and at a speed of 6 knots (11.112kmh) only one vessel at a time may operate within the zone for a
- an approach zone of a 250m radius applies around any whale

#### Approach zone:

must be adhered to while within the 'approach' and 'controlled' commercial and private vessels are bound by these rules, which have been developed for the protection of whale sharks. Both The Biodiversity Conservation Regulations set out rules that

> approach zone: Vessel operators in the



# Whale shark swim contact zone



# Whale shark vessel zones



while the vessel is in the approach zone. Below The whale shark flag which commercial operations must display

- exceed 10 people in the water at any one time.
  - nze motorised propulsion aids
- undertake flash photography, use cameras on extension poles metres from the tail
  - approach closer than 3m from the head or body and four
- restrict the normal movement or behaviour of the whale shark
  - attempt to touch or ride on a whale shark

## Swimmers in the approach zone must not:

interacting with whale sharks. or disturbed, the following interaction protocol applies when experience and to prevent the animals from being harmed their body, tail or fins. To ensure that you have a safe, enjoyable animals that can inflict serious injury if they strike a swimmer with 2016. Although they appear to be 'gentle giants', they are wild Land Management Act 1984 and the Biodiversity Conservation Act Whale sharks are fully protected under the Conservation and

> with whale sharks Swimmers interacting



Above The Ningaloo Marine Park coastline. Photo - DBCA

Dubbed the 'gentle giants' of the sea, whale sharks visit the waters of Ningaloo Marine Park, Ningaloo Coast World Heritage Area on the Western Australian coast to feed on plankton between the months of March and July, some years extending and later after August.

During this time, we are privileged to be able to swim with these magnificent animals for an exhilarating and truly memorable experience.

# Who to contact

If you would like more information, or can provide details about sightings or interaction with whale sharks, you can contact the Parks and Wildlife Service at the Department of Biodiversity, Conservation and Attractions (DBCA):

#### Parks and Wildlife Service **Exmouth District Office**

20 Nimitz Street, Exmouth, WA PO Box 201 Exmouth WA 6707 Ph: (08) 9947 8000 Fax: (08) 9947 8050 Email: whale.shark@dbca.wa.gov.au

## Milyering Discovery Centre

Cape Range National Park Ph: (08) 9949 2808 Fax: (08) 9949 2541

### Parks and Wildlife Service **Pilbara Regional Office**

Lot 3 Anderson Road Karratha Industrial Estate, Karratha WA PO Box 835 Karratha WA 6714 Ph: (08) 9182 2000 Fax: (08) 9144 1118

You may also wish to visit the Parks and Wildlife Service website at pws.dbca.wa.gov.au and search whale sharks.



Department of Biodiversity, **Conservation and Attractions** 



## Indemnity

In participating in the whale shark watching tour, the participant acknowledges and assumes all associated risks and will hold the Director General, his employees, servants and agents free from any and all liability, causes of action, debt, claims and demands of every kind and nature whatsoever which may arise out of or in connection with participation in the tour.

Cover photos - DBCA

This publication is also available in alternative formats on request. Information current at February 2022

# Experiencing whale sharks in Ningaloo Marine Park





Department of Biodiversity, Conservation and Attraction













**Above** Whale shark feeding on plankton. *Photo – Dani Rob/DBCA* 

## Whale sharks

The mass spawning of more than 200 species of coral in March and April each year is part of a chain of biological events that heralds the arrival of the world's largest fish, the whale shark (*Rhincodon typus*) to Ningaloo Reef. These gentle giants cruise the world's oceans in search of concentrations of plankton.

A fully grown whale shark can reach up to 18m in length, but more commonly, individuals encountered at Ningaloo Reef are between 4–12m long. A 12m whale shark may weigh as much as 11 tonnes and have a mouth more than 1m wide.

This annual aggregation is one of the key reasons that the Ningaloo Coast achieved World Heritage listing in 2011.

#### Above Whale sharks gills. Photo - DBCA

## Distribution

Whale sharks are found in a band around the equator between about 30° north and 35° south, in water temperatures of 18°C to 30°C. They prefer water temperatures around 27°C, where cool nutrient-rich upwellings mingle with warm plankton-laden waters.

Occurrences of the whale shark are patchy and unpredictable. Ningaloo Reef is one of only a few places in the world where they appear regularly in any numbers, in near-shore waters where they are easily accessible to observers.

# Feeding

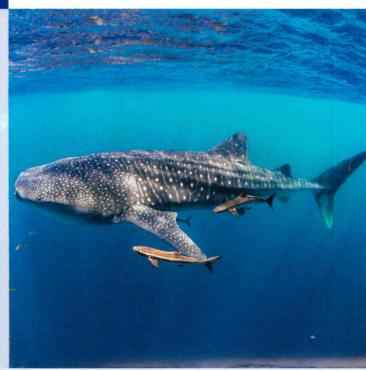
Whale sharks have thousands of tiny teeth arranged in more than 300 rows, but they neither bite nor chew their food. They are filter feeders, either actively sucking water into their mouths or cruising along near the surface of the water with their large mouths agape. Planktonic organisms, including small crustaceans such as krill and copepods, are strained from the water through the whale sharks' gills by a fine mesh of gill rakers. They are also thought to supplement their diet periodically with squid and small fish such as anchovies and sardines.

# Life cycle and reproduction

Little is known about the whale shark's life cycle or exactly how long they live. It is speculated that whale sharks have a life span of more than 100 years, reaching maturity at about 30 years.

They are ovoviviparous, bearing live young which hatch from an eggcase while inside the mother's body before being expelled. The period of gestation is unknown and the number of live young born also remains unclear.

Below Whale shark and cobia. Photo - Migration Media



## Conservation

# The role of the Department of Biodiversity,

## **Conservation and Attractions**

The Department of Biodiversity, Conservation and Attractions (DBCA) is entrusted to conserve and manage Western Australia's wildlife, lands, waters and resources for the benefit of present and future generations.

DBCA ensures that access to natural attractions is well managed, is ecologically sustainable, and only occurs where appropriate. To do this requires a diverse range of skilled professional staff including scientists, rangers, wildlife officers, recreation planners and commercial operations administrators.

DBCA recovers some of the cost of management and research activities through a system of licence charges on tour operators. By doing this, commercial whale shark interactions can be managed to be both ecologically and economically sustainable.

Tour operators are expected to provide their passengers with a safe, interactive tour with the whale sharks without causing harm to the animals.

Participation in whale shark tours, therefore, provides for further research into whale shark behaviour and ensures that future generations will also have the opportunity to swim with whale sharks at Ningaloo.

**Below** DBCA's Parks and Wildlife Service staff monitoring Ningaloo Marine Park. *Photo – DBCA* 

## Research

Very little is known about whale shark numbers, behaviour patterns or how much human contact they will tolerate before becoming disturbed and perhaps avoiding any contact. Care must be taken to ensure that we do not lose this unique opportunity for interaction. Scientific information about whale shark migratory patterns, breeding and life history is limited. Exactly why the annual aggregation at Ningaloo occurs and the reasons for any seasonal fluctuations in shark numbers are not yet fully understood.

Scientific research continues to be conducted into the relationship between coral spawning events, upwellings, and the yearly aggregation of whale sharks to Ningaloo Reef.

DBCA supports various research programs including the effects of ecotourism on whale sharks, photo identification and tagging research.

Three forms of tags, acoustic tags, archival tags and satellite tags are being used to record information on depth, temperature, light and movement patterns. To protect the welfare of the sharks, tagging is conducted strictly in accordance with regulations of animal ethics committees.

**Below** Tourists swimming with a whale shark. *Photo – Cam Skirving* 

# **Threats**

Whale sharks are a threatened species. Listed as endangered on the International Union for Conservation of Nature (IUCN) Red List means they are facing a high threat of extinction in the wild.

Two of the threats they face at Ningaloo Marine Park are boat strike and ingestion of litter.

## What can we do to help?

SLOW DOWN! Whale sharks commonly swim at the surface of the ocean, making them susceptible to being hit by boats. Reduce your speed when travelling through the marine park, and maintain a lookout at all times.

Small particles of plastics in the water can be ingested by not only whale sharks, but by other animals such as manta rays, turtles and whales. Remove all your litter from the marine park and dispose of it responsibly.

Whale sharks have feelings too... Mind what your propellers do.

**Below** Injury due to propeller strike. Photo – Three Islands Whale Shark Dive





