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Ningaloo Coast
World Heritage since 2011

Gujawari (Whale sharks) in Ningaloo Marine Park



Information guide



GOVERNMENT OF
WESTERN AUSTRALIA

Department of Biodiversity,
Conservation and Attractions



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Front cover Photo – Justin Bumpstead / Live Ningaloo

Above Photo – Oashy Photo / Ningaloo Discovery

Gujawari (whale sharks)

Gujawari (goo-ja-wa-ry) is the term used by the Nyinggulu Traditional Owners for whale shark.

"Gujawari is very special to us. He connects us spiritually. Gujawari is very respected by us Traditional Owners. We must always respect gujawari" - Hazel Walgar - Baiyungu Elder

We acknowledge the Baiyungu, Thalanyji and Yinigurdira people as the original custodians of the Nyinggulu (Ningaloo) Coast. We pay our respects to past, present and future generations and recognise their enduring connection to land, sea, and sky. For countless generations, their deep cultural knowledge and care for Country have sustained the rich marine ecosystems that support gujawari. We honour this legacy and, through joint management, strive to walk together in protecting and caring for these waters and the species that inhabit it, into the future.



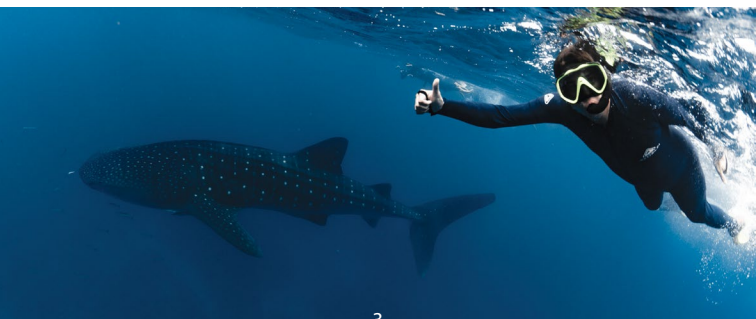
Above Photo – Oashy Photo / Ningaloo Discovery

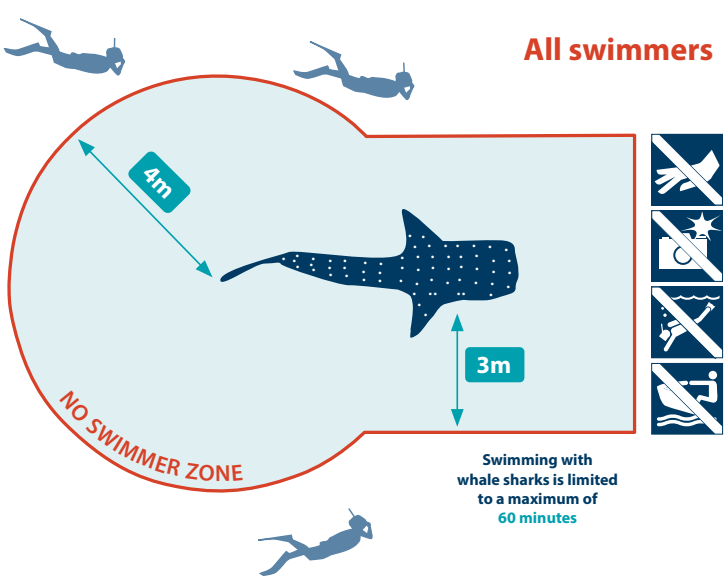
Interacting with gujawari recreationally

When on our ngarrari (land) and thanardi (sea) Country, the Traditional Owners ask that you respect and care for gujawari by following these interaction protocols.

Gujawari may seem like gentle giants, but they are powerful, wild animals. Sudden movements or changes in behaviour can occur, and accidental contact with their body, tail or fins can cause serious injury. To ensure a safe and respectful experience for both you and the animal, all swimmers and vessels must adhere to these rules to avoid harm or disturbance.

Below Photo – Aimee Jan / Three Islands Whale Shark Dive

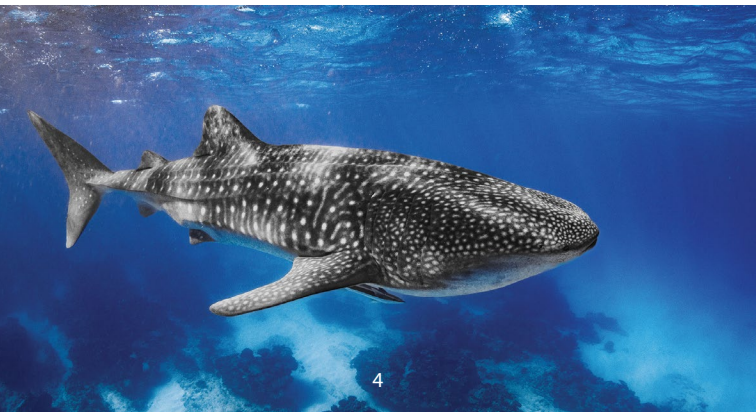


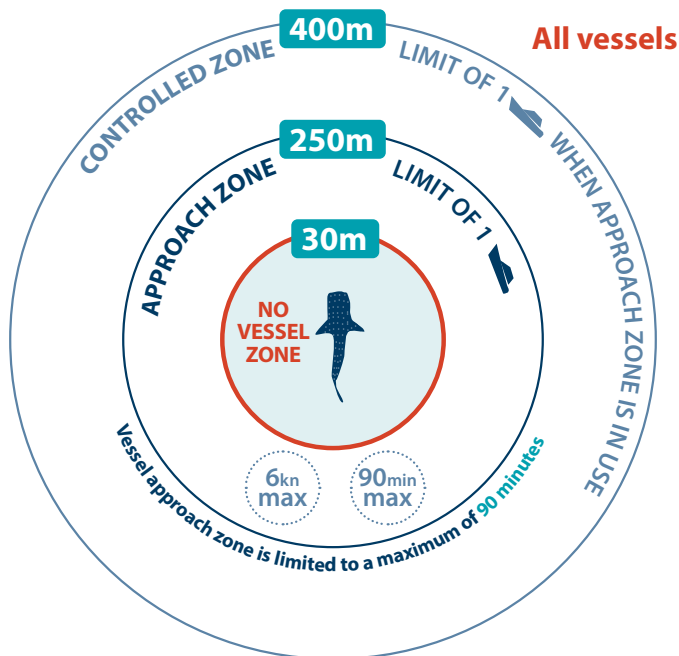


Swimming with gujawari recreationally

- Cease swimming with gujawari **immediately** if they display unusual or stressed behaviour.
- Do not attempt to touch or ride them.
- Do not restrict their normal movement or behaviour.
- Keep your distance: stay at least 3m from the head/body and 4m from the tail.
- No flash photography or cameras on extension poles.
- No motorised propulsion aids.
- No scuba diving.
- Time limit: swimming is limited to a maximum of 60 minutes.

Below Photo – Oashy Photo / Ningaloo Discovery





Recreational vessels and gujawari

Within the approach zone:

- vessels must not be within 30m of the gujawari
- only one vessel may operate for a maximum of 90 minutes and at a maximum speed of six knots
- the first vessel within that zone is deemed to be 'in contact'
- vessels must display dive flags when swimmers are in the water.

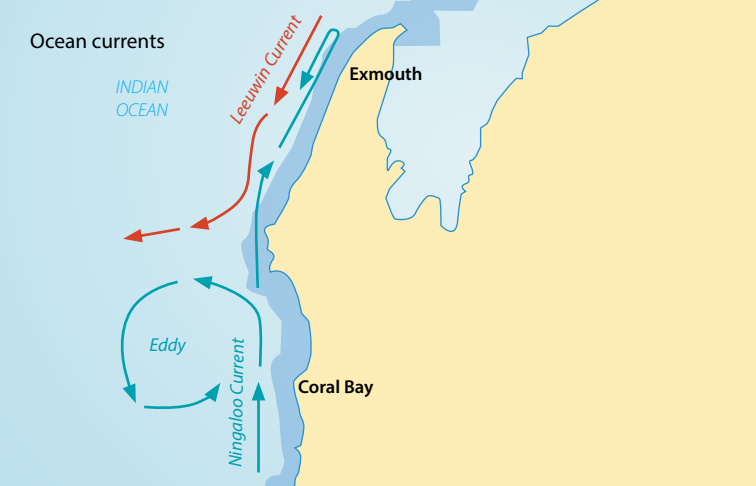
Within the controlled zone:

- only one vessel is permitted when the approach zone is in use
- all other vessels must remain at a distance of 400m
- no jet skis, or other personal watercraft, are permitted within 400m.

These flags are used by tour operators.

Always keep your distance and maintain the required separation distance.





Above Ningaloo ocean currents.

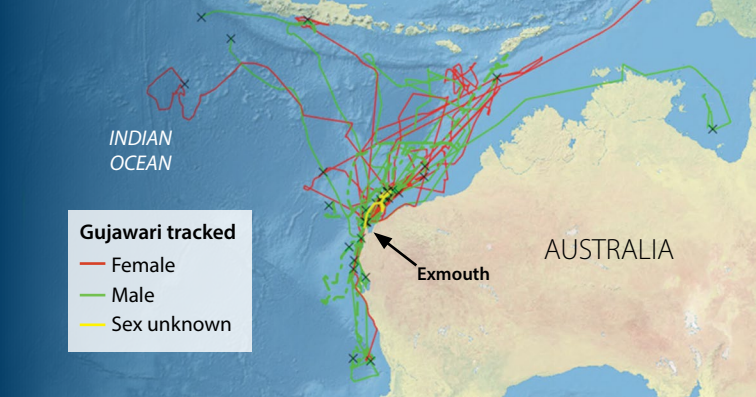
Why gujawari come to Nyinggulu

Each year, the arrival of gujawari at Nyinggulu is triggered by a combination of ocean currents and biological events. In March and April, over 200 species of coral engage in mass spawning, resulting in plankton blooms that attract gujawari. The warm, nutrient-rich Leeuwin current flows southward along the coast, while the northward Ningaloo current creates eddies that help retain plankton in the area.

Research using acoustic tags and behavioural tracking shows that gujawari follow deep ocean ridges where plankton congregates and migrate vertically to feed near the surface at night. Historically, their peak season for the aggregation was March to July, but sightings now extend as late as November. This remarkable seasonal aggregation is one of the natural wonders that contributed to the Ningaloo Coast's World Heritage listing in 2011.

Distribution

Gujawari are found in tropical and warm temperate waters around the world, typically between 30°N and 35°S, where water temperatures range from 21°C to 30°C. They prefer water temperatures around 27°C, where cool, nutrient-rich upwellings mix with warm plankton-laden waters.



Above Tracks indicating movements of satellite tagged gujawari over a year. Map – supplied with thanks by CSIRO

While gujawari are generally solitary and their presence can be unpredictable, aggregations tend to occur in regions with specific oceanographic features such as upwellings, eddies, food pulses, surface temperatures, deep channels, and vertical mixing. Ningaloo Reef is one of the few places in the world where they aggregate regularly in nearshore waters.

Feeding

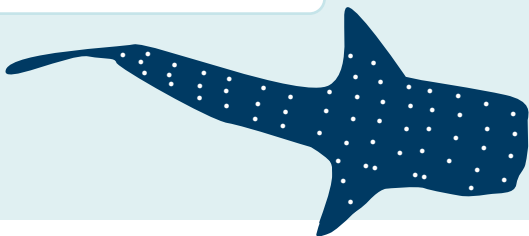
Gujawari are unique among sharks, with a terminal mouth that opens right at the front of their head, which is perfect for its feeding style—filter feeding. Though they have over 300 rows of tiny teeth, they don't bite or chew. Instead, they feed by actively sucking in water or cruising near the surface of the water with their mouths open, filtering planktonic organisms like krill and copepods, through their gills by a fine mesh of gill rakers.

Below Photo – Oashy Photo / Ningaloo Discovery



Did you know?

Everything we currently know about whale shark gestation comes from a single female caught off the coast of Taiwan. She was found to be carrying over 300 embryos at various stages of development, all sired by the same male! This rare discovery has provided the only direct insight into whale shark reproduction to date.



Life cycle and reproduction

Little is known about the gujawari life cycle or exactly how long they live, but it is speculated that they may live for more than 100 years! Gujawari are ovoviviparous, meaning they produce eggs that are hatched within the body, so that the young are born alive but without placental attachment.

The gestation period is unknown, and the number of pups born at one time remains unclear. When born, pups measure around 55cm in length and are fully independent.

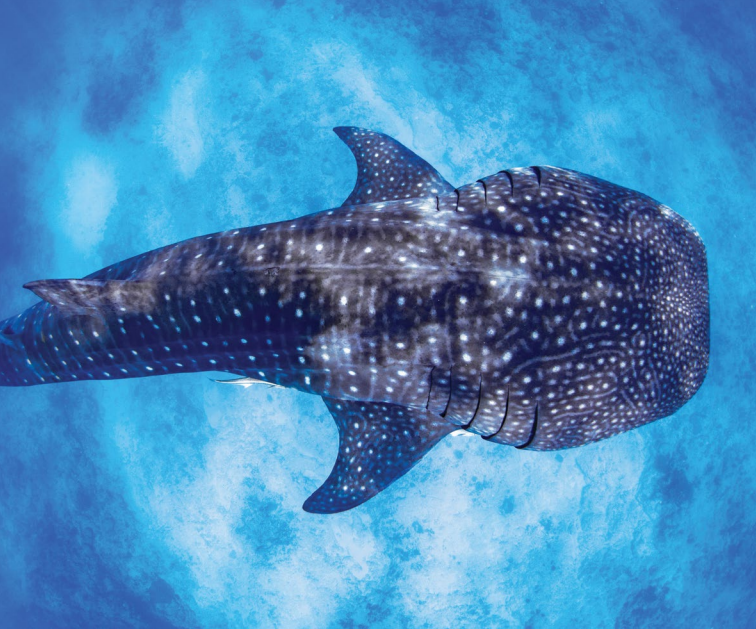
Gujawari fact file

Distinguishing features Three prominent ridges on either side of body, distinct pattern of white spots and stripes, semi-lunate tail and a wide, square head.

Size They are the largest living fish and can grow to 15–20m long. However, at Ningaloo Reef, they are typically between 3–12m long, with the average being 5m.

Growth Slow growing with late maturation, which means populations are slow to recover from exploitation.

Life span Possibly more than 100 years.



Above Photo – Tash Allen / Oashy Photo

Cohort at Ningaloo Majority are juvenile males, with a 3:1 male:female ratio.

Food Filter feeders, feeding on plankton such as krill and copepods.

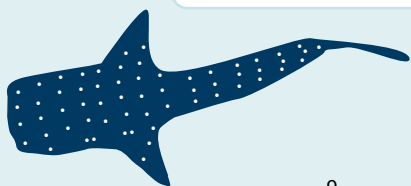
Reproduction Ovoviviparous; giving birth to live young that hatch from an egg case while inside the mother's body.

Sexual maturity May not occur until over 8m in length, at approx. 30 years old.

Protection Protected under the *Biodiversity Conservation Act 2016* and the *Environment Protection and Biodiversity Conservation Act 1999*.

Did you know?

The spot pattern is unique for each individual—just like a human fingerprint! This is what we use to identify them.





Above The Ningaloo Marine Park coastline. *Photo – DBCA*

Conservation

Gujawari are a threatened species recognised at multiple levels:

- Western Australia: Listed as Specially protected species - Migratory species under the *Biodiversity Conservation Act 2016*.
- Australia (National): Classified as Vulnerable and Migratory under the *Environment Protection and Biodiversity Conservation Act 1999*.
- Globally: Listed as Endangered under The IUCN Red List of Threatened Species 2016.

The Department of Biodiversity, Conservation and Attractions (DBCA), alongside Traditional Owners, conserves and manages Western Australia's wildlife, land and waters for present and future generations. This ensures that access to natural attractions is well managed, and is ecologically sustainable.

To do this requires a diverse range of skilled professional staff including:

- Traditional Owners / joint management partners
- scientists
- rangers
- wildlife officers
- recreation planners
- commercial operations administrators.



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

Research

Despite their size, very little is known about gujawari. Researchers are currently working to answer some big questions, including:

- Where do they go when they leave Nyinggulu?
- Where and how do they breed?
- How many gujawari are there worldwide?

To help inform some of these questions, researchers use a combination of data and tools to help study them, including:

- Photo ID: by photographing and cataloguing individuals, researchers can track movements and estimate population sizes over time.
- Tagging: satellite and acoustic tags help researchers monitor depth, temperature, and movement. These tags have revealed that gujawari can dive to almost 2000 metres!
- Tour operator data: operators help collect valuable information on interaction and identification during tours.

Understanding the behaviour, movements, and population dynamics of gujawari is essential for protecting them—not just at Nyinggulu, but across their global range.



Above Injury due to propeller strike. *Photo – Brooke Pyke*

Threats

- Boat strikes: frequent injuries from propellers.
- Pollution: ingestion of rubbish and other materials.
- Climate change: rising sea temperatures may shift migration and reduce food sources.
- Unsustainable tourism: poorly managed interactions can disrupt natural behaviour and increase pressure on individuals.
- Fishing: bycatch and illegal hunting.

What can you do to help?

- Go on a sustainable gujawari interaction tour.
- Follow the legislated separation distances if intending to swim with gujawari.
- **Go slow for those below** - reduce your speed and keep a lookout at all times.
- Submit your own photos on-line to the [ECOCEAN photo identification library](#).
- Never discard fishing line, nets, plastic bags and other rubbish anywhere, especially into the ocean. Collect and dispose of any marine debris you come across.
- Contact local community groups or government departments involved with gujawari conservation to see how you can help.
- Refuse to buy or eat gujawari products such as shark fin soup and gujawari meat (tofu fish) when overseas.

More information

dbca.wa.gov.au/wildlife-and-ecosystems/marine/whale-shark-management-western-australia

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