

SAGREN

Seychelles Whale Shark Monitoring Newsletter



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Whale shark Research and conservation in Seychelles. Part 1.

Whale sharks (*Sagren*) are found regularly around Seychelles, occurring throughout the year with most sighting being recorded around Mahé Island during two peak periods: June to August and October to December. In fact, some of the earliest sightings were recorded here. In 1868 Irish naturalist E. Percival Wright reported seeing a 14m (46ft) specimen in Port Victoria, Mahé.

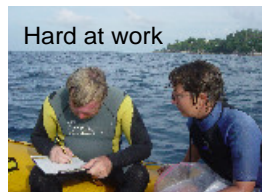
Being the largest fish, they have almost no natural predators and until recently were not considered good eating. Today, the oriental restaurant trade is promoting the flesh of these gentle giants as 'Tofu Shark' and so they are actively hunted in many areas. For a shark with a long and slow repro-

ductive cycle, this is very bad news. As long ago as 1990, conservationists had already flagged the whale shark on the IUCN (International Union for Conservation of Nature and Natural Resources) Red List as 'endangered, vulnerable or rare'. However, by 1996 the species was still unprotected and listed as 'Data Deficient'.

In order to provide some data to support the proposed protected status of whale sharks, a pilot project to monitor their numbers and occurrence around Seychelles was started in November 1996 with assistance from PADI Project Aware. This was implemented by local conservationists, divers and volun-

teer helpers in liaison with the Shark Research Institutes of South Africa and New Jersey (see next issue for details)

Following on the success of this project, those people



involved in it formed the Marine Conservation Society Seychelles (MCSS) incorporating a local chapter of the Shark Research Institute. This allowed the continuation of the monitoring work and the support of

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Whale Sharks Protected in Seychelles!

On the 13th January 2003, the Cabinet of Seychelles approved the proposal by the Minister of Environment, Mr. Ronny Jumeau, to protect whale sharks in the territorial waters of Seychelles. This further enhances the initiatives of other range states, such as the Maldives, South Africa, Australia and India to protect the species throughout its trans-boundary migrations around the Indian Ocean.

Whale shark Tags — An overview

Individual whale sharks can be recognised from the distinct spot patterns on



PHOTO: Udo Engelhardt

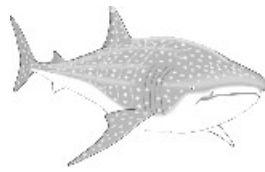
Shark with damaged dorsal

their dorsal fins and behind their gills. Scarring damage to the fins can also be a good visual identification. However, it still takes a discerning eye to distinguish between individual sharks as well as knowledge of previously sighted sharks.

Scarring and spot patterns are therefore not an easy or

reliable means of identification. Most of the people who report whale shark sightings have no background in whale shark identification and often forget to note scarring or spot patterns when encountering the gentle giant, so overwhelmed are

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Whale shark tags...

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they by the experience.

With the aim of facilitating whale shark identification, MCSS set up a Whale Shark Tagging Programme in Seychelles based on a pilot project in 1996 (see next issue for more details). Since then, the programme has used various tag types to monitor the distribution and migration of whale sharks in the western Indian Ocean.

Identifying sharks ... Initially the tags used were thin 'spaghetti' tags which were effective but difficult to read. In 2001, these were replaced by placard tags similar to those used in Belize by the UK Darwin Initiative Whale Shark Project. The tag has a coloured bar indicating the year of tagging, the letter 'S' representing the Seychelles programme and an identifying number. The tag is anchored to the back of the shark, normally close to the dorsal fin, by a titanium anchor dart that is inserted into the shark's thick



Placard Tag



Tagged sharks are easily identified

PHOTO: Udo Engelhardt

skin by a tagging applicator.

Tracking the Sharks ... The big advantage of the basic visual tag is that you do not need any special equipment to track the shark; you simply check each shark for its number and can build up a picture of its movements by repeated sightings. This is good in theory but it is also the major weakness in that it requires someone to not only find the shark again but get close enough to read the tag; unfortunately experience has shown that these sharks are seldom seen and re-sighting data is not easily generated.

This has heralded the use of high technology or 'smart tags' which can transmit information over distances so that it is not necessary to actually re-sight the shark to confirm where it is. The Seychelles programme is using three types of these advanced tags each giving remote information in different ways.

Archival Pop-Off Tags are compact tags, about the size of a small hand light, that record and store data on depth, temperature and light intensity (i.e. approximate geographical position). They are designed to 'pop-off' and float to the surface at a set time and then transmit the data by ARGOS satellite to the project team. The translated data provides an overall picture of the shark's movements as well as its daily diving and surfacing habits.



Pop-Off Tag

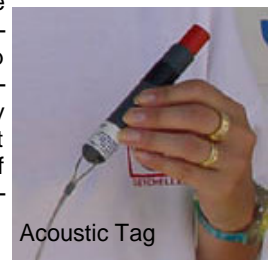
Spot2 Positional Tags transmit whenever they are at the surface and by cross triangulation between the receiving Argos satellites they can give accurate position fixes. The whole tag is encapsulated in a buoyant casing to ensure that the aerial is above the water for transmissions when the shark is near the surface.

Spot2 tags are however relatively bulky, causing drag in the water, which in turn places more stress on the anchor point and makes it more difficult to keep them attached to the shark.



Spot2 Tag

Acoustic Tags are designed for close quarters tracking. The tag has an acoustic transponder which sends out a 'sonar-like' signal which is picked up by an in-water hydro-phone. This system gives extremely accurate fine scale details of the sharks movements and diving/surfacing behaviour but is extremely resource intensive, requiring a boat to follow the shark for 48 to 72 consecutive hours. This can give excellent data but the logistical requirements and the shark's capability to travel up to 35 kilometres a day tend to restrict the usage of this technology.



Acoustic Tag

Whale shark Research and conservation...

(Continued from page 1)

other marine related conservation projects.

The principle aim of the MCSS Whale Shark Monitoring programme is to elucidate the habits of these remarkable sharks and promote their conservation both locally and internationally.

The monitoring programme relies on being able to identify individual whale sharks and then record their activities and movements by subsequent re-sightings. This gives an indication of the number of sharks

around the islands and also what they are doing and where they go.

The pilot programme relied solely on voluntary funding and support and this is still the core basis of the project now run under the auspices of the Marine Conservation Society Seychelles (MCSS). In Summer 2001, the MCSS also received grant funding from the World Bank Global Environmental Facility for the project which has allowed MCSS to upgrade the technology used and fund some specialist assistance in implementing the monitoring programme.

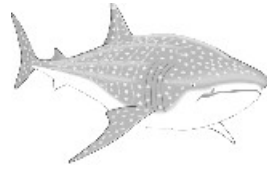
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NOTICE BOARD

Sightings in Jan-Mar 2003

- 88 reported sightings
- 70 in-water encounters
- 34 sharks identified
- 13 sharks tagged
- 15 sharks sexed (13M/2F)
- 12 sharks re-sighted from this season
- 3 Sharks re-sighted from last season





Collision with a whale shark!

On the 16th February 2003, the high speed vessel La Creole limped back to Mahé for repairs after a collision with a Whale shark near Praslin. According to Travel Services Seychelles (TSS) who operate La Creole, the vessel was replacing Cat Cocos, the regular ferry service between Mahé and Praslin, which was undergoing routine maintenance.

The boat suffered slight damage (a hole approximately four inches in diameter in its fibreglass hull) and was temporarily taken out of service for repairs, suspending the regular boat service between Mahé and Praslin.

In an interview with Seychelles Nation, Mr Hugh Hoareau of TSS Marine Ser-

vices said “we were travelling quite fast and were due to arrive on Praslin in 15 minutes when the coxswain noticed three whale sharks in our course. He swerved and successfully avoided them but apparently there was a fourth fish below the water surface”.

Passengers on board, including Mr Hoareau, commented that it felt “as though we had beached”. None of the 20 passengers on board sustained any injuries.

The whale shark however, wasn't so lucky. Mr Hoareau said that there was blood in the water behind the vessel and that the partly submerged 8m shark was seen swimming away. The blood appeared to be flowing from a wound on its back.

The extent of injuries sustained by the whale shark is unclear. The 3 other sharks were unaffected by the incident and continued to swim at the surface

This is the first ever reported collision incident between a vessel and a whale shark in Seychelles. However, Seychelles cannot

“the coxswain noticed three whale sharks in our course. He swerved and successfully avoided them but apparently there was a fourth fish below the water surface”.

claim fame for this isolated incidence as there are a number of reports dating back to 1932 of similar occurrence in the north western Indian Ocean region. In fact, according to E.W Grudger (1938), more whale sharks have been rammed by steamers in the Red Sea region than in any other part of the world.

Grudger believed that the frequency of such incidents were indicative of the sharks habits and behaviour. Being the largest fish, it has no enemies and seems to be unafraid of large vessels. In fact, whale sharks have been observed swimming so closely to vessels, that people have suggested they were inspecting them. They get caught on the bow either because they lie inert in the path of the approaching ship, or because they swim across the path so slowly that they are caught. The sharks that survive such encounters bear distinctive and often extensive scars.



Photo by Steve Maximo

A 5m whale shark, Rhincodon typus, seen swimming just beneath the surface of the water on a clear day.

If you see a whale shark...

Please help us by recording as much information as you can:

- Where and when the sighting occurred
- The rough size of the shark and any marks, tags etc
- What the shark was doing at the time
- The presence of any other marine animals in the area
- Any other people in the area (to avoid duplicate sightings)

Phone the Whale Shark Hot line ~ 590 772

Fill out the on-line sighting form at our web site: www.mcsc.sc

OR Post your finding to us at: PO Box 384
Victoria
Mahe
Seychelles



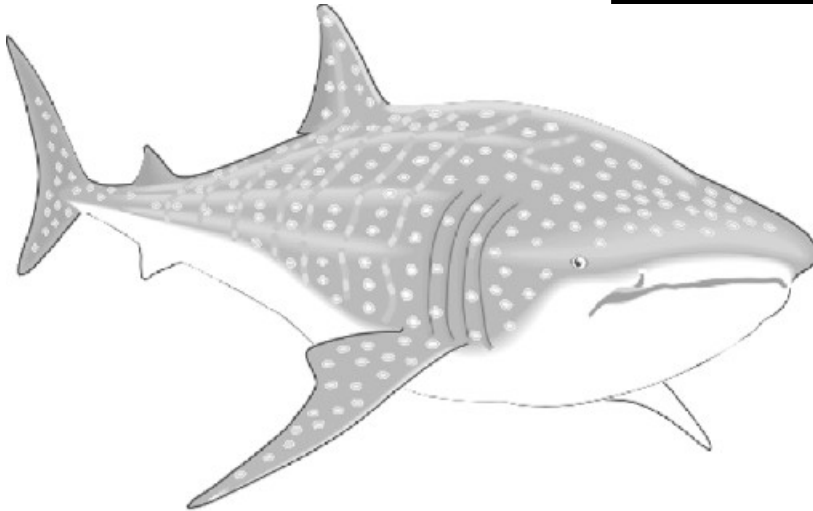
If you find a detached tag please return it to MSCC as we may be able to download additional data from them.



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Adopt a whale shark

By becoming a whale shark foster parent you are ensuring that research on whale sharks is continued. Your support will assist in protecting these amazing creatures and ensure that they continue roaming the world's tropical oceans.

Adopt a whale shark for one year and we will send you (or your friend):

- A personalised Adoption Certificate
- Fact sheets on your chosen shark
- A general whale shark fact sheet
- The MCSS Whale Shark Newsletter



Adopt me !

Mazarin (s275): A 4½ m juvenile male whale shark tagged on the 25th January 2003 near L'ilôt Island. He has a distinct scaring pattern and is easily recognized.

Pas-par-tou (s247): A 6m juvenile male whale shark tagged in 2001 with Tag s201 and again in 2002 after the original tag was found to have been partially broken. He now carries the tag s247.

YES! I want to adopt a whale shark ___ Mazarin___ Pas-par-tou for one year

For myself/as a gift (delete as necessary)

Please state Delivery address

Name to go on Adoption Certificate:

Address:

I enclose Cheque/Postal Order for US\$50/SR250 made payable to: MCSS

OR Please charge my MasterCard/Visa Account No.:

Issue no.: Name on Card:

Signed: Message:

RETURN TO; Marine Conservation Society Seychelles, PO Box 384, Victoria, Mahe, Seychelles