

Shark Research Institute



Newsletter

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Update - SRI's Satellite Tag

by Susan Kim Smith

On 8 March 1998, SRI's Whale Shark Tagging Team implanted a satellite tag in an eight-metre female whale shark at Cape Vidal, South Africa. For the first ten days after being tagged, the whale shark (named PADI for the foundation that provided funding for the satellite tag) swam just offshore, remaining close to the surface and generally moving in a northeasterly direction.

The satellite-tagged whale shark was just north of Xai-

Xai on the Mozambique coast when she changed course and began heading southwards back down the coast, making circular forays offshore and swimming to depths of 30 metres.

The shark was off the southern Mozambique coast when signals from the tag became erratic. Subsequent signals indicated that the tag was moving across Swaziland, and then in and around the town of Witbank.

Southern Mozambique is fast becoming popular among divers and ski-boat fishermen, and we thought that one of them may have removed the tag from the shark. Alternatively, the tag

could have become detached as a result of some other event and discovered floating in the water or washed up on the beach. Within hours of receiving a series of fixes from Witbank, SRI personnel headed to the area, but they were unable to locate the tag. The last location transmitted was from the street outside a warehouse, then signals from the tag ceased.

On 9 April, the Witbank newspaper ran a front-page story about the tag, including photographs, and a reward was offered for its return.

On the evening of 10 April, Argos picked up a transmission that confirmed the tag

Inside This Issue

- 2** Megamouth Shark #12
- 3** Global Shark Attack File
- 5** Whale Sharks in Australia...
- 6** ...and in the Philippines
- 6** Commercial Shark Fishery Closed

was still in Witbank. Dr. Chris Kilian, using the coordinates provided by Argos, drove to the area from which the transmissions originated, and created a detailed map of the area. The fixes extended over a distance of 4.6 km in an area consisting of houses, sheds, store rooms, workers' cottages, boats, roads, farms and dump sites. Next morning, SRI called in the Endangered Species Unit (ESU) of the South African Police and Sergeant Steven Sanders and his teams scanned the area on frequencies provided by Argos.

For the next 36 hours Sgt Sanders' teams patrolled the area, in contact with SRI Headquarters (New Jersey, USA) via cell phone. SRI HQ, in turn, remained in contact with Service Argos (Maryland, USA) during each satellite pass over Witbank, but the time lag between transmission and notification of SRI was always several hours.

The following day the satellite tag went on special status; each transmission from the tag sounded an alert at Argos headquarters. Then, instead of e-mailing locational data after processing, raw data was faxed directly to SRI Headquarters within 15 minutes of transmission. Locations were faxed to Princeton, New Jersey, every three hours around the

clock and immediately forwarded to Sgt Sanders in Witbank, South Africa.

The ESU has considerable experience recovering satellite tags placed on elephants. With a helicopter and teams equipped with scanners, ESU pinpointed the tag's location and recovered it. The tag was found hanging from the ceiling in a bar owned by two fishermen. The fishermen said that they intended to return the tag as soon as they resolved a problem with their newly-installed stereo system; every 90 seconds it emitted a loud beep – the tag attempting to transmit its location to the satellite!

Later the same day Andrew Gifford flew to Johannesburg where he was met by members of the ESU and the tag was returned to him.

Thanks to the professionalism and perseverance of Superintendent Lategan and Sergeant Steven Sander of the ESU, and Captain Leon Smit and Andre Rautenbach of their technical support unit, SRI's satellite tag was recovered before its battery was depleted. The tag's floatation collar had a deep gouge, possibly from the propeller of the fishermen's boat. The tag has been repaired and will be redeployed as soon as we can locate a suitable shark, probably some time in September.

MEGAMOUTH SHARK #12

Megamouth, a deep water shark with a luminous mouth, reaches a length of about 4.5 metres. When the first specimen was captured in November 1976 it represented a new family, genus and species. Between 1976 and 1997 a total of 11 megamouth sharks were caught worldwide.

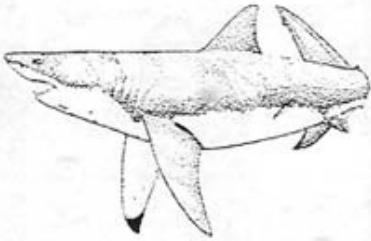
Then, on 23 April 1998, Megamouth shark #12, a +5.2-metre (17-foot) mature female specimen was caught in a large set net off Osawe (on the Siono-Misaki peninsula), southern Honshu, Japan. And by a stroke of good fortune, Dr. Kazunari Yano was contacted.

The shark was caught 25 km (15.5 miles) north of the site where Megamouth #10 was captured, and about the same time of year (1 May 1997).

Megamouth #12 had what appeared to be mating scars along her flank. On the basis of this and the capture of #10 at almost exactly the same time of year, Dr. Yano hypothesized that megamouth sharks may use the bays off southern Honshu as pupping grounds, dropping perhaps a single pup at a time.

speaker. Her topic: Sport diver participation in scientific research projects.

Dean Fessler stopped at HQ en route from Dyers Island, South Africa. Dean will be returning to South Africa in the fall to continue Mark Mark's behavioral research with white sharks.



White shark by Alessandro De Maddalena

Mark Marks will be visiting HQ September en route to the Bahamas where he will be working with Erich Ritter in a study of Caribbean reef sharks.

Rick Scammon, Director of CEDAM, has returned from an expedition to the Maldives. Rick and his team collected valuable data for SRI as well as superb video footage of sharks!

Webmaster David Remsen has been designing a new web site for SRI that will enable SRI taggers to enter data online. There will also be a form on which details of shark attacks can be reported directly to Dr. Levine. The site will also feature links to our affiliates and other key sites.

Clive Branson, Creative Director at Bryan Mills & Associates, story-boarded

Shark Research Institute Newsletter

and composed a musical score for a proposed television commercial about SRI's shark conservation program.

→ In the market for a new car? If so, please consider donating your used vehicle to SRI Headquarters. Our ancient station wagon - used to ferry equipment to and from the shore, schools, etc. - will cost more to repair than the vehicle is worth, and we'd prefer to put our limited resources into research efforts instead of a new used vehicle. The donor of a vehicle to SRI can take a tax deduction equal to its book value on his/her 1998 income taxes.

Whale shark Management Programme, Western Australia

The Western Australian Government has released a management programme to ensure ecological sustainability for one of the most important eco-tourism activities in the region; whale shark interactions at Ningaloo Reef.

Each year a seasonal aggregation of whale sharks occurs in Ningaloo Marine Park from March to May. This has led to the development of a small but growing ecotourism industry

focusing on human/whale shark interactions.

The whale shark is a protected species in Western Australian waters. Since 1993 whale shark ecotourism within the marine park has been managed by the Department of Conservation and Land Management (CALM) though a system of controls, including the licensing of a limited number of operators for whale shark interaction tours. At present there are 14 licenses, and there is some demand to increase this number.

It is unclear whether the increased ecotourism pressure is having any short or long-term detrimental impacts on individual sharks or the whale sharks as a whole. The variability in whale shark abundance and distribution, all the reasons for the aggregation at Ningaloo Reef, and the capacity of the industry are unknown. Consequently, evidence of any impacts are difficult to obtain or interpret. With the limited information available, a precautionary approach to management has been adopted.

The number of commercial interaction licenses is restricted until more information becomes available through current and future research.

The management programme establishes management

Swimming with Whale Sharks

The Code of Conduct

To ensure that you have a safe, enjoyable experience and to prevent the animals from being harmed or disturbed, the following code of conduct applies when interacting with whale sharks

Swimmers and Divers must not:

- *Attempt to touch or ride on a whale shark.*
- *Restrict the normal movement or behavior of the shark.*
- *Approach closer than three metres from the head or body, and four metres from the shark's tail.*
- *Undertake flash photography.*
- *Use motorized underwater propulsion vehicles.*

objectives, reviews current management controls and compliance monitoring procedures, and describes future management actions. It also details the research required to gain a better understanding of the population biology of whale sharks, the ecology and

natural variability of their environment, and the monitoring required to determine if any impacts are occurring as the result of increasing tourism pressure.

The short-term objectives of the programme are intended to improve the management of whale shark interactions. The long term objectives will provide a scientific basis to determine if the management strategies need to be modified to minimize any negative impact.

When more detailed information is available and appropriate monitoring programmes are implemented, it will be possible to better ensure that whale sharks populations at Ningaloo are not being subjected to an unacceptable level of disturbance and that development of whale shark ecotourism in Western Australia's marine reserves is sustainable and equitable.

Jeremy Colman, Department of Conservation and Land Management, W.A.

Commercial Shark Fishery Closure

The United States National Marine Fisheries Service is closing the commercial fishery for large coastal

sharks conducted by persons aboard vessels issued a Federal Atlantic permit in the Western North Atlantic Ocean, including the Gulf of Mexico and the Caribbean Sea. This action is necessary to ensure that the adjusted second semi-annual quota for the period 1 July through 21 December 1998 is not exceeded. The closure will be effective from 11:30 p.m. EST 4 August through 31 December 1998.

Philippine Law "protects" whale sharks?

On 25 March 1998, President Ramos of the Philippines signed a directive prohibiting the killing of whale sharks and manta rays in his country's territorial waters and prohibiting trade in their products, effective 15 April 1998.

Unfortunately, the penalty for each violation is only \$125 U.S., so the "protection" appears to be little more than a public relations effort. Filmosa, the Manila-based fishing company headed by Robert Chang, simply increased the payment for each whale shark carcass, and has placed orders for whale sharks during the upcoming season in the fishing villages of the Bohol Sea.