

# Shark Research Institute

## Member Newsletter



Shark Research Institute Global Headquarters

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### *Whale Sharks Threatened by Overfishing*

Dr. Jennifer Schmidt, Director of SRI's whale shark DNA study, and her colleagues collected DNA from 68 whale sharks in 11 locations in the Indian and Pacific Oceans and the Caribbean Sea -- an area that covers most of the sharks' known range.

Results showed little genetic variation between the populations, which indicates migration and interbreeding among far-flung populations of the giant sharks. "Our data show that whale sharks found in different oceans are genetically similar, which means that animals move and interbreed between populations," said Schmidt. "Whale sharks in protected waters cannot be assumed to stay in those waters, but may move into areas where they may be in danger."

Whale sharks can grow to 50 feet or longer and weigh over 20 tons, and their range can span oceans. They do not breed until they are about 25 to 30 years old, so it will take a long time for the species to recover from recent population declines. Whale sharks are listed on CITES Appendix II, but not every country protects them. The large animals are especially prized by fishermen for meat and fins used in soup.

It is thought that mature animals may breed and give birth out in the open ocean. Little is known about neonatal or juvenile sharks, including where they grow to maturity, or how and when they move between regions. That has made devising effective conservation efforts a problem.

"The only real threat to whale sharks are humans," said Schmidt. "To design proper conservation plans, we need to understand the sharks' lifestyle. We can only protect their habitat if we know what habitat they use."

Schmidt credits some countries for closing whale shark fisheries and hopes that efforts such as ecotourism programs, which sometimes include swims with the gentle giants, may prove an attractive economic alternative to fishing. With the money brought in by well-managed ecotourism programs, Schmidt said, "people in many countries have come

to realize that whale sharks are more valuable alive than dead."

The research study was funded by the Shark Research Institute and the University of Illinois at Chicago. The results of the study have been published. To download the journal article, go to [www.sharks.org/publications](http://www.sharks.org/publications)



*Jennifer Schmidt, Ph.D.*

### *Palau's Plan for Plunder*

*By Edward Dorson*

The Republic of Palau, famous as a dive mecca for its high-voltage shark population, is now facing a legislative siege where the practice of shark finning may soon be legalized. Two insidious bills, No. 8-44 and No. 8-50, were introduced during March and were passed in their first readings by a newly elected Senate. If passed in their second and third readings by both the Senate and House of Delegates, these bills can become law. Either would devastate Palau's sharks and marine resources for the financial gain of a relative few. This poses a terrible threat for the sharks, the ecosystem, and for Palau's economy and culture in one of the planet's last relatively healthy marine habitats.

In stark contrast, six years ago Palau's lawmakers reasoned that activity that encouraged the observation of sharks in the wild was a tremendous asset for Palau's economy and ecology. Divers and snorkelers repeatedly experiencing these amazing predators was a thousand times more profitable than their slaughter for consumption. Palau's stewardship became a beacon for marine conservation worldwide. The new law contained two groundbreaking regulations: *Continued on page 2*

### ...Palau continued

- denies: "...any foreign fishing vessel to fish for shark, or any part of any such shark."

- demands: "If any shark is inadvertently caught or captured, it shall be immediately released, whether dead or alive; if the shark is caught or captured alive, it shall be released in the manner that affords it the greatest opportunity for survival."

Palau's new government has now introduced legislation at war against its own marine environment. Senate Bills' No. 8-44 & No. 8-50 would revoke the above-cited regulations that protect Palau's sharks.

Senate Bill No. 8-44 allows the "accidental" taking of sharks in Palau's waters and essentially repeals Palau's ban on shark finning by introducing the notorious 5% shark fin loophole (the absurd provision where two and one half finless sharks can be dumped at sea for every one taken ashore).

Senate Bill No. 8-50 specifically allows for five years of export tax exemption for all fish caught and assigns General Santos City in the Philippines as the designated transshipment port for the catches (presently the harbor in Palau). Without tax collection incentive and with catches avoiding Palau, any Palauan oversight regarding regulation is removed, such as preventing rampant shark finning and overshooting quotas. This bill is particularly worrisome in that it's sponsored by the brother of Palau's President, the one man who can veto these bills.

The emergence of these bills coincided with negotiations between Palauan and Filipino fishing firms to enter into agreement along with delegations representing Palauan political support for the fishing companies. This was spearheaded by Kuniwo Nakamura, former Palau President (1993-2001) and the president of the Kuniyoshi Fishing Co., a firm with a long history of arrests for illegal finning within Palau's waters.

It is noteworthy that Mr. Nakamura is also the owner of the firm that oversees all vessel activity in Palau's national port. In addition, he is president of another company that was recently given a no-bid contract to perform all security at Palau's airport. Thus, Nakamura, a man tied to shark finning, essentially has control of all air and sea shipping activity in Palau.

The sharks of Palau must not be allowed to be plundered by a handful of corrupt or short-sighted politicians and fishing firms. By encouraging shark finning and overfishing while also exempting



Palauans from fish-caught tax revenue, Palau would quickly destroy its resource base for future generations, and would drastically undermine its potential for self-sufficiency and sustainability.

Please lend your voice to help stop this travesty and let Palau realize they're under a harsh global spotlight. Describe what despoiling Palau's waters would mean ecologically and also in personal terms of ever again seeing Palau as a desirable travel destination. Two agencies are fighting for the bills withdrawal, and are requesting emails from all concerned individuals for formal review before the Palau Senate Committee on Resources, Commerce, Trade and Development.

Comments should be submitted to: Palau Chamber of Commerce • [pcoc@palaunet.com](mailto:pcoc@palaunet.com) and Belau Tourism Association • [bta@palaunet.com](mailto:bta@palaunet.com). Also cc the Senate Assistant • [dilchesechid@hotmail.com](mailto:dilchesechid@hotmail.com)

For a more expansive account of this situation and for other means to influence the status of Palau's legislative threats, please go to the "Current Campaign" page on my website: <http://dorsonstudios.com>

### Summer Shark Tournaments

- 2009 Monster Shark Tournament - July 23-25, Oak Bluffs, MA.
- Newport Monster Shark & Tuna Tournament - August 19-23, Newport, RI

Are there any shark tournaments scheduled for your area? If so, please take the opportunity to educate visitors about the need for shark conservation. Many sharks do not survive even "tag and release" tournaments. All members who wish protest these tournaments, please contact SRI for materials.

## Greenland Shark Expedition

July 13-21, Jeffrey Gallant and Dr. Chris Harvey-Clark of SRI-Canada and GEERG will be leading an expedition to study the Greenland Shark. The team also includes two staff from the Quebec Aquarium, the Chief Diver from Montreal Biodome, two diving naturalists and some good friends. They will be tagging Greenland sharks with accelerometer tags. "To our knowledge, this has never been done before in open water with such large sharks," says Gallant. "The tags should even be able to measure tail beats."

The sharks will be tagged in open water on scuba at depths ranging from 40 to 75 feet. One person tags the sharks while two others serve as shark "fenders." To date, the fending off of an irate shark has never been required. In addition, the team will deploy acoustic receivers at various sites, record environmental data such as water temperature, visibility, salinity and tide info on every dive, collect tissue samples from live sharks in open water (on scuba) and capture as many images as possible of the Greenland sharks. They will also scout the shoreline for dead sharks to conduct necropsies and collect samples. scout entirely new sites for a future feeding experiment (2010), document the sea life observed in the Greenland shark's environment, and record whale and seal vocalizations (this is a cetacean hot spot — from belugas to blue whales).

## Cocaine smuggled in dead sharks

The Mexican navy seized 1,967 pounds of cocaine that was being smuggled inside finned, frozen sharks. Inspectors in the port town of Progreso on the southeastern shore of Mexico said they slit open one of the sharks after detecting an anomaly on an X-ray and black bags filled with rectangular cocaine packets spilled out

As Mexico and the U S A escalate drug enforcement efforts, more of the drug trade is taking to sea routes. The navy said a total 870 packets of cocaine were seized from the shark shipment. The ship carrying the sharks, *the Dover Strait*, had been loaded in Costa Rica.



On June 20, Captain Zero, Joe Terzuoli, SRI member and owner and skipper of the famous dive boat *John Jack* died on the wreck of the *Texel*, a Dutch steamer sunk off Atlantic City, NJ, by a German U-boat in 1918. A highly-skilled diver, Joe had been diving for 33 years – since 1976 -- and had logged more than 3,500 dives, including many on the *Andrea Doria*, the Mt. Everest of NY/NJ wrecks. He was also an ardent marine conservationist and supporter of SRI; in 2008, he hosted a fundraiser for SRI on the *John Jack*.

Captain Zero was one of the most beloved dive boat captains in New York/NJ waters and SRI extends its deepest condolences to his wife, Susan.

## From The Cage . . .

### News & Notes about SRI Members

- Triathletes Jim Machinchick & Pat McKenzie competed in the New England Season Opener on May 10 and the Boys and Girls Club Triathlon to raise awareness of the plight of sharks. They are due to compete in two more events. Sponsors are needed, and we urge local members to get out and support them:

- \* July 12 in the IRONMAN 70.3, Providence, R.I.

<http://ironman.com/events/ironman70.3/rhodeisl and70.3>

- \* August 23 Timberman IRONMAN 70.3

<http://www.endorfunsports.com/tiberman.html>

- Congratulations to Jeffrey Gallant for his appointment as the new manager of SRI-Canada.
- Dr. Arch McNamara recently donated three Mac desktops, two Mac laptops and a Sony notebook computer to SRI's education program! Thank you, Arch, they are being put to very good use!!
- Amos Nachoum, BBC wildlife photographer of the year 2007 & 2008 auctioned two of his award-winning white shark images and donated the proceeds to SRI's conservation programs. One of the posters was purchased by SRI Trustee, Jupp Kerkernick, who donated it to SRI.
- Congratulations and many thanks to Nate Davis, 12, who presents programs on sharks and the need to protect them as well as their possible use in cancer research. Nate presented his program to a local oncologist and school administrators, held a fundraiser at his school in Battle Creek, MI, collecting \$431 for shark conservation, and collected 140 "No-Finching" signatures!

## Basking Shark Riddle Solved!



The five-decade-long mystery where basking sharks (*Cetorhinus maximus*) in the Western Atlantic Ocean go during the winter months has been solved by a team led by Dr. Gregory Skomal, a biologist

with the Massachusetts Division of Marine Fisheries and the lead author of a study that included researchers from Woods Hole Oceanographic Institution, the University of New England and state officials from Massachusetts and Maine.

Commonly sighted in surface waters during summer and autumn months, the disappearance of the huge plankton-feeding sharks (they grow to lengths of 30 feet and longer) during winter has been a great source of debate ever since an article in 1954 hypothesized that they hibernate on the ocean floor during this time," said Skomal.

Skomal and his colleagues tagged 25 sharks with pop-up satellite archival transmitting tags, of which 18 tags transmitted data for periods between 12–423 days. Six of the sharks swam to the Caribbean and two traveled to South America, to Venezuela and the mouth of the Amazon River. Through the use of temperature profiles retrieved from the tags, the researchers discovered that some of the sharks stayed at depths of between 800 and 3,300 feet for up to five months at a time.

This significantly broadens the geographic range of the basking shark, which was previously believed to be restricted to temperate waters. The migration and the depth at which the sharks swim also explains why the location of basking sharks during the winter months remained undetected for so long.

"The sharks could be traveling to the depths of tropical waters to give birth in more stable water temperatures," Skomal said. "This might provide perfect habitat for them to give birth and gestate their young," he theorized, noting that pregnant females and young sharks are not seen in the western North Atlantic.

The research is important because it reveals that subpopulations of the basking shark may be part of one single population, heightening the need to understand and protect them, Skomal said. Our results

have important conservation implications because tropical waters should no longer be considered a barrier to demographic or genetic connectivity among basking shark subpopulations. Global coordination of conservation efforts will therefore likely be necessary to rebuild basking shark populations throughout the species range."

For more information, see the paper: Skomal, GB, SI Zeeman, JH Chisholm, EL Summers, HJ Walsh, KW McMahon and SR Thorrold (2009) Transequatorial migrations by basking sharks in the Western Atlantic Ocean. *Current Biology* 19, pp. 1019–1022. The abstract is available at:

[http://www.cell.com/current-biology/abstract/S0960-9822\(09\)00978-6](http://www.cell.com/current-biology/abstract/S0960-9822(09)00978-6)

## Whale Sharks Off Louisiana

Capt. Russell Underwood, a commercial fishing boat captain, spotted 44 whale sharks off the coast of Louisiana last year. This year he turned his boat into a research vessel for a week.

Underwood followed a line of weeds over an area called Ewing Bank, about 55 miles off the coast and about 90 miles southwest of Dulac, where others had seen large groups of whale sharks in past years. The weeds hold vast numbers of fish eggs, indicating that the filter-feeding whale sharks came there for a fish egg feast, and raising the question of how they found the eggs, which typically hatch within 24 hours.

"This was a large group - 12, 15 animals," said researcher Eric Hoffmayer of the University of Southern Mississippi's Gulf Coast Research Laboratory. Most sightings in the northern Gulf of Mexico are of single animals; from 2002-07, only seven groups were bigger than 15. During this expedition, satellite tags were deployed on three sharks and seven whale sharks were photographed, all of the seven were new to the Ecocean database.

It has long been known that whale sharks travels take them to the Northern Gulf of Mexico, but they tend to remain a distance offshore. In 1999 and 2000, SRI deployed satellite tags on whale sharks off Utila. One shark headed directly across the Caribbean to the coast of Texas. Two others traveled along the coast of Belize, the eastern flank of the Yucatan Peninsula, into the Mexico Basin, then along the coast of Texas. One tag detached off Corpus Christi, Texas, another off the west coast of Florida.

## Thank You to Our Supporters!

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- **Al Vinjamur**

## New Seats on SRI's Board of Trustees

SRI's Board of Trustees is seeking additional members.

Criteria for potential Trustees include:

- Actively support and promote the mission of SRI;
- Be able to secure annual grants or corporate donations, or make a significant personal financial commitment;
- Be available to attend (either in-person or by conference call) at least one Board of Trustees meeting each year.

SRI members, sponsors or individuals who are interested in applying for a seat on the Board should send an email to [marie@sharks.org](mailto:marie@sharks.org).

## Expeditions

Spaces are available on the following expeditions. Please note: These are *not* dive vacations; they are research expeditions. All participants will be expected to assist SRI scientists to gather and record data. As result, some costs are partially deductible from your US Federal income taxes. *Spaces fill quickly.* To reserve a space or obtain more details, go to:

[www.sharks.org/expeditions](http://www.sharks.org/expeditions)

### Whale Sharks

**Utila, Honduras:** Any week. \$1,760 per diver.

**Philippine Islands:** April 2010. \$3,000 per diver.

### White Sharks

**False Bay, South Africa:** July 25 — August 3, 2009. \$3,900 per person. Cage diving optional. These are the sharks of 'Air Jaws' fame, known for spectacular aerial displays. If you prefer a shorter stay or other dates contact HQ at 609.921.3522. 609.921.3522..

## Dead Sharks Banned



The Shark-Free Marina Initiative (SFMI) aims to reduce worldwide shark mortality. It encourages shark conservation at participating sport fishing and resort marinas by prohibiting the landing of any shark at the marina.

According to NOAA between 2004-2008, nearly 500,000 sharks were killed in US waters, removing them from an already struggling breeding population. Shark Free Marinas hopes to reduce the slaughter of shark and encourage responsible use of our ocean.

The SFMI encourages shark conservation at sport fishing and resort marinas by prohibiting the landing of any shark at the participating marina. Fishermen will not be allowed to bring sharks into the marina for any purpose. Participating marinas receive dock signs (marine grade aluminum 12"x18"), information packs as well as the right to use the Shark Free Marina logo on their website and advertising, and the marina will be listed in SFM's directory.

The initiative will encourage sport fishermen to exercise catch-and-release techniques, acceptance of which is an incremental step in reducing the kill-rate of sharks. For more information, go to: <http://sharkfreemarinas.com/>

### Meg Jaws Fail To Sell At Paris Auction

The giant jaws of a huge prehistoric shark, *Carcharodon megalodon*, were scheduled to be auctioned by Christie's in Paris on April 8, 2009. The jaws, which stand over 6.5 feet (2.2 meters) tall and have 168 teeth, are estimated to be worth 150,000 euros (\$202,000) but they failed to sell at the reserve price of 150,000 euros: The bidding stopped at 140,000 euros, Christie's said.



### Summer Auction

SRI's annual summer auction will get underway shortly with some fantastic items: A week's stay in a castle, a dive holiday on the Great Barrier Reef, treasure from a Spanish galleon, shark jewelry, dive gear, unique artwork, books and even whale sharks.

Carolyn Nickels will be posting the catalogue on our website along with a link to the auction, and if you've signed up for email notices on our website you will be alerted when it starts. The event will last only one week and is not to be missed!

### Take Shark Fin Soup Off the Menu

Any Asian restaurant that agrees to remove Shark Fin Soup from its menu may display our No Finning decal at its entrance. We also provide the restaurant with cards explaining their decision that may be clipped to their menus. As more Chinese restaurants stop offering the dish, fewer sharks will be slaughtered. If your local Chinese restaurant is 'shark fin free', contact Laura Morris (laura4sharks@gmail.com) or HQ and we will send them a decal and as many menu cards as they request.



### The 41st Megamouth - for Dinner

Fishermen trawling for mackerel off Masbate near Donsol in Sorsogon, Philippines, caught one of the rarest of all sharks, cooked and ate it.

The megamouth (*Megachasma pelagios*), 500-kg and four-metres in length, was caught on March 30, 2009 on the eastern coast Burias Island in the Philippines.

The first megamouth shark was caught off Hawaii in 1976. So different was it from all other sharks that it necessitated the creation of an entirely new family and genus – prompting the scientific community to hail it as the 20th century's most significant marine find – rivaling the rediscovery of the coelacanth in 1938. Named for its enormous mouth, which is a metre wide and lined with a brilliant silver band to attract planktonic prey in the depths, the shark is a poor swimmer, and ranges sporadically throughout the Atlantic, Indian and Pacific Oceans.

The 41<sup>st</sup> megamouth shark, a male, was retrieved by the fisherman who cooked it "kinunot-style" (with coconut milk, malunggay leaves and chili).

The Donsol-Masbate region is a world-renowned haven for whale sharks, dolphins and manta rays, and apparently for megamouths as well. The seasonal appearance of whale sharks in the bay of Donsol transformed the once sleepy town into one of the Bicol region's busiest revenue generators and earning it the title of butanding (whale shark) capital of the world.

Another megamouth shark was netted on June 8, 2009, off Taiwan's Changgong coast. The 3.9-metre shark was sold next day for NT\$18,000 (US\$549) to a local shark museum where it will be preserved and put on



### Congratulations to Matt Potenski!

Matt Potenski, SRI Director of Field Operations, took 3rd place in the International photo competition at Beneath the Sea with his photograph of Zahir, a whale shark that he tagged in Tanzania.

