

Shark Research Institute Newsletter



Shark Research Institute Global Headquarters
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New Genetic Tests to Find White Sharks in Soup



Photo courtesy: Tom Campbell, SOS Foundation

The white shark is being fished out of existence by humans, who sell its teeth and jaws for trophies and consume its fins in shark fin soup. The shark fin trade, in particular, is depleting populations of many species of sharks. In the northwestern Atlantic, scientists estimate that white sharks have declined by as much as 79 percent.

Now, using a new genetic test (similar to the DNA technology used in crime labs), scientists have the capability to accurately distinguish white sharks from other species, even when only dried fins are available. The study, published in the August issue of the *Journal of Conservation Genetics*, was conducted by the Guy Harvey Research Institute (GHRI) of Nova Southeastern University in Florida and sponsored by the Wildlife Conservation Society (New York).

"This forensic test was developed to be highly streamlined and simple to use, while still being very accurate in its ability to identify white shark body parts on a global scale," said Dr. Mahmood Shivji, director of GHRI and the genetics research team. "In addition to its application to white sharks, I anticipate this test may prove useful as a model for the design of forensic tests for wildlife in general."

During the 2000 CITES meeting, proposals to

place great white sharks on the more restrictive Appendix I list – which bans all trade – and Appendix II, which merely regulates trade, were defeated, in part because of concerns that regulations would be too difficult to monitor. However, with a definitive test for detecting great white sharks, a major obstacle to obtain protection under CITES has now been removed.

Japanese vote-buying in the Caribbean

In October 2002, Eastern Caribbean Coalition for Environmental Awareness (ECCEA) and a sister organization, the Swiss Coalition for the Protection of Whales (SCPW), published "*Socio Economic Aspects of Japanese Aid: Japan and the Caribbean evaluating Japan's fisheries aid programme in the East Caribbean.*" The document, authored by one of the region's leading economists, indicates the Japanese aid program does not address areas of real need, but is a means of exercising control over the votes of these small island states at international treaty organizations.

Japanese officials have acknowledged the links between Japan's fisheries aid policy and the support Japan expects in return for such aid: The receiver must sign a fishing agreement with Japan and support their stance for use of marine resources at international commissions and conventions of parties.

Since 1987, several independent micro-states in the Eastern Caribbean – Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines – have benefited from Japanese bilateral grant aid amounting to US \$160 million, all of which is concentrated on the fishing sector. What stands out in the report is

that while aid from the European Union, which is twice the above figure, addresses all sectors of the economy, Japanese aid is concentrated on a single sector: Fisheries. Twenty-two fisheries complexes have either been financed or promised to these islands. Records show that this initiative was first launched by Japan at the International Whaling Commission (IWC) then at CITES, and corresponds in each case to a timeframe and a first transfer of aid from Japan to the country in question. In many cases, support for Japan's agenda represented a radical departure from an island's national policies, and provided Japan with a blocking minority at the negotiating table.

The report's recommendation is to develop socio-economic programs that are tailored to the needs of these islands and will allow for independent decision-making. Such a strategy is well within the remit of European and other international funding agencies around the world. Meanwhile, these small nations remain attentive to Japanese policies which until now have reflected on decisions made at CITES regarding endangered wildlife species.

The pdf file can be downloaded at:

<http://www.swisswhales.org/news/SCPW-Stimmenkauf E.pdf>

From the Cage

"Between January and April 2003, we received reports of 89 sightings of whale sharks in the Seychelles. Seventy were in-water encounters and 34 sharks were identified. Thirteen sharks were tagged and 12 sharks resighted from this season. To enhance data collection and enable formulation of a national management plan, a workshop on Whale Shark Monitoring in Seychelles was held on May 28th."

David Rowat, Director – SRI Seychelles

July 8: "I have been in South Africa for just over a week conducting my white shark research. Yesterday my team recorded six predations by white sharks on Cape fur seals and identified 11 sharks around our boat. *Neil Hammerschlag*

July 17: "I recently filmed and photographed some Greenland sharks in the St. Lawrence Estuary in Quebec. The footage is incredible and it is national news in Canada. We are currently working on a one-hour documentary on my quest to film this animal. It will be aired on Discovery Channel in early 2004."

Jeffrey Gallant, Regional Director – SRI-Canada

GLOBAL SHARK ATTACK FILE

SRI maintains the Global Shark Attack File (GSAF) as a resource for researchers, physicians and the media who require accurate information about these incidents.

BAHAMAS: On July 4, Benjamin Brown, 39, was spearfishing at Walkers Cay when his calf was bitten by a 7' bull shark. Dr. Erich Ritter is investigating this incident.

USA: Florida: On June 24, Hannah Hathaway, 12, was standing in the water at Cocoa Beach when her thigh was lacerated by a small brown shark. Two days later, Shelby Tostevin, 15, was surfing at St. Augustine beach when his ankle was lacerated by a 3.5' shark. On June 30, Eric Wheaton, 17, was surfing at New Smyrna Beach when his right foot and toe were lacerated by a shark.

Hawaii: On June 24, John Marrack, 60, was swimming with a pod of dolphins at Makua Beach when his foot was bitten by a shark. This incident was reported to involve a 12' white shark. **Johnston Atoll:** On the afternoon of June 22, George Fahey, 51, was swimming when his leg was bitten by a shark.

SRI Board Search Committee

SRI's Board of Trustees is expanding the number of seats available on the Board. SRI members or sponsors that are interested in a seat on the Board should send an Email to marie@sharks.org.

Criteria for a potential Trustee: 1) Actively support and promote the mission of SRI, 2) Have the ability to obtain grants or corporate donations of \$20,000 annually or make a similar personal financial commitment. 3) Be available to attend (either in-person or by conference call) at least one Board of Trustees meeting each year.

SRI ONLINE NEWS

This newsletter is published four times a year, but members with internet access can opt to receive our monthly online newsletter instead - which saves paper, postage and the format allows for in-depth articles, interviews, breaking news, action alerts, more photos and even video clips. To request the online newsletter instead of the printed version, send an email to cnickels@sharks.org or marie@sharks.org.

SOS—Save Our Seas Foundation

Long ago, most of us believed that in times of crisis a hero would arise to save the day and good would always triumph. Life tries to convince us that isn't necessarily true, but conservationists are hard-core optimists; we always believe that some day, somehow common sense will prevail because the alternative is unacceptable. And now, in what has been called the 11th hour of the final moments of the ocean ecosystem and many shark populations are on the brink of collapse, a hero has surfaced.

Our hero doesn't wear a mask (except when he is diving) or live in the Batcave, and until a few weeks ago only a few even knew his identity. The founder of SOS has made a decision to use whatever facilities he has available to him to protect sharks and other threatened marine species. To accomplish this objective, he created Save Our Seas Foundation.

"The ink was barely dry on the Foundation's papers," said Tom Campbell, Director and Producer of the SOS Foundation's television series, "when the grants were being awarded." One of the first recipients of SOS funds was SharkWorld, a major museum exhibition on sharks at Iziko - South African Museum in Cape Town, that will educate thousands of people about the vital role of sharks in the marine ecosystem, their vulnerability and need for protection. SharkWorld is being developed by a Cape Town natural history design partnership, SWH, and the museum with coordination by Dr. Leonard J.V. Compagno, head of the Shark Research Center at the museum. A skeletal replica of *Carcharodon megalodon*, the extinct giant megatooth shark, was to be the focus of an exhibit at the museum but was shelved due to lack of funds. Enter SOS, which provided funds for the exhibit that will open in early 2004.

Another recipient of The SOS Foundation's generosity is a biologist working at the Shark Research Center, Alison Kock, a graduate student of Dr. Compagno's at the University of Cape Town. She is using remote sensing to study the behavioral ecology (movement patterns, feeding behaviour and intraspecific interactions) of white sharks that hunt Cape fur seals in the waters surrounding Seal Island in False Bay. Karl Laroche, a graduate student, of Simon Fraser University, British Columbia, Canada, works closely with Ms. Kock and is investigating the effects of eco-tourism on shark and seal behavior at Seal Island and is studying interactions of white sharks with ecotouristic cage dive operations. The movements and interactions of the white sharks will be studied using sound-producing tags attached to the sharks that will transmit position and depth data in real time to a remote radio base station on land near Simonstown via three RAP (radio acoustic positioning) buoys anchored off Seal Island. The RAP buoys have been anchored and tagging of sharks has commenced. This field research is part of a cooperative project on False Bay white sharks which includes Marine and Coastal Management, the University of Cape Town, Simon Fraser University (British Columbia, Canada), the Shark Research Center, Vemco, Ltd. (Nova Scotia, Canada, which is lending the RAP buoys for the project), the South African National Research Foundation, and the South African Navy. Information generated from both projects will be vital when implementing management plans regarding White Shark conservation in South Africa. Funds provided by The SOS Foundation will provide much-needed equipment for recording and documenting shark behaviour and predatory activity, provide operating expenses required to run both projects for the 2003 shark season, and also enable the purchase of extra acoustic transmitters for the study.

A third project funded by The SOS Foundation involves a captive sandtiger shark. The shark was damaged by shark nets in KwaZulu-Natal, South Africa, and restored to health in a local aquarium. Thanks to SOS funds, the shark will be fitted with a satellite tag and released, allowing scientists to track its movements along the coast. Leslie Rochat of AfriOceans Conservation Alliance, a non-profit NGO supporting shark conservation and research, Dr. Malcolm Smale of the Port Elizabeth Museum and Oceanarium, and Dr. Compagno of Shark Research Center are involved in the project.

In the Red Sea, off the coast of Jeddah, silky sharks will tracked via satellite tag and their DNA compared with other populations of silkies by a London university, thanks to The SOS Foundation.

An SOS Foundation grant has also been awarded to Dr. Robert Rubin, Instructor in Life Sciences at Santa Rosa Junior College, who was named the California College Professor of the Year by the Carnegie Foundation for the Advancement of Teaching. During 1990 and 1991, Dr. Rubin participated in research

SOS Foundation - *continued*

on harp and hooded seals that live on the fast ice of the St. Lawrence River. Recently, he has been studying giant Pacific manta rays and various shark species at a remote area in Mexico. Dr. Rubin is also studying the remoras found on these animals and, thanks to SOS, he will return there for another month-long expedition in November to continue the study.

An experienced and highly-skilled diver, the founder formed The Save Our Seas Foundation to fund marine field research, but applications for grants are not accepted. So how does The SOS Foundation select grantees? How does it avoid being taken in by charlatans, as did the foundations that donated mega-dollars for a sculpture of sludge in the sludge-dump site off the New York bight and similar projects? The SOS Foundation's executives are seasoned, professional, highly experienced divers that seek out recipients. The founder's Diving Supervisor, marine biologist Chris Clarke, and Cinematographer and Producer, Tom Campbell, sought out the foremost shark scientist in the world, Dr. Leonard Compagno. Dr. Compagno has a clear vision of what needs to be done and knows virtually everyone in the field. And Campbell, a legendary wildlife cinematographer who has worked from the frigid seas of Norway to the tropics, has often stated: "The most important contribution any wildlife photographer or filmmaker can make is to create an awareness that will protect and preserve our environment for future generations."

With Campbell and Clarke as key executives of The SOS Foundation, it comes as no surprise that it is also a strong advocate of shark conservation. In fact, what sets The SOS Foundation apart from most other foundations is its rapid response to environmental emergencies, as in the case of Cocos Island. Known as the Island of Sharks, Cocos lies midway between Costa Rica and the Galapagos Islands. Vast schools of scalloped hammerheads wheel through current-whipped waters swirling around this ancient volcano. Marbled stingrays mate along its southern crater. Giant manta rays, some with an 18-foot wingspan, soar through these warm tropical waters. Whitetip reef sharks rest by day in shallow bowls and crevices, piled atop each other like logs, and waken at night to hunt en-masse. The whitetips are resident, but the giant whale sharks seen in these pristine waters are visitors. Cocos' wealth of marine life proved too tempting for longliners and the drift-net boats from foreign ports. Costa Rica's Park Service lacked a patrol boat to apprehend poachers violating this marine sanctuary 300 miles off its shore. That is, until Avi Klapfer of the *Undersea Hunter* met with representatives of The SOS Foundation. In August 2003, the marine life of Cocos Island will be guarded by a high-speed military long-range vessel, fully equipped to patrol up to 40 miles away from the island, courtesy of The SOS Foundation and with support of the *Undersea Hunter*.



Photo courtesy: Tom Campbell, SOS Foundation

All of the projects sponsored by The SOS Foundation are filmed in a High-Definition digital format. In fact, SOS has two production High-Definition production crews: one crew is currently filming in Saudi Arabia and sending tapes to America for online and offline editing, while Campbell's crew are scouting new locations while producing television documentaries which will create an awareness of the sea and the work of The SOS Foundation, as well as its educational publications. For updates on current projects funded by The SOS Foundation, you will soon be able to visit their interactive website at www.SaveOurSeas.com. By creating The SOS Foundation, its founder has demonstrated his personal commitment to sharks and marine conservation, and has earned the gratitude and support of all of us who share his vision and objectives. As far as sharks are concerned, he just may be their desperately-needed and long-awaited hero!

For additional information, contact: Save Our Seas Foundation; Avocats au barreau de Geneve; 6, rue Bellot 1206, Geneve; Switzerland

A Royal Celebration

By Stan Waterman

My 80th birthday seems to have become an ongoing celebration. Indeed – and considering the libidinous, voluptuarian, indulgent tenor of my life – it is remarkable that I have reached four score years. The real date, April 5, 2003, was duly celebrated in Bali at the end of my three-week Banda Sea tour. I had much to celebrate. My daughter had survived an emergency operation at a rustic (to put it gently) hospital in the town of Sorong at the western end of Irian Jaya. A report on that harrowing experience was written for *Fathoms*.

At this writing, July 4th, I am the day-after survivor of a third celebration of the same birthday. Why so late? My best friend, Peter Benchley, decided to have a party for me. To that end he chartered the entire *Tahiti Aggressor*, invited me to ask some of my friends and planned to bring some of his family and friends as well. Since his son, Christopher, was not free from school until early June, the boat was chartered for the last week in June, on into early July.

For the first time in our 53 married years, my good and patient wife, Susy, would finally go on a dive trip. For years I have earned my bread by hosting trips on live-aboard dive boats for almost half of each year. My world of diving has been as strange to Susy as her world of organic food and environmental causes has been for me. She started the first organic food store in Princeton, The Whole Earth Center. Under her direction it

prospered. Management of that multimillion-dollar business, grandmothing and keeping a snug harbor for me to come home to has been her energetic and productive lot.

Except when I took the whole family with me to French Polynesia in '65, we never had the time or circumstance to share an adventure together. The experience was not only a joyous revelation to her. It was nothing less than an epiphany. I had revealed that live-aboards could be "civilized". No prudent man, returning from a trip alone and met at the airport by his wife will answer affirmative her question, "Did you have a good time?" I have always effected a dolorous face, shaken my head and allowed that once more I was lucky to escape that "hell ship" alive.

It happens that the *Tahiti Aggressor* and its clone, the *Palau Aggressor* may just be the two most comfortable, diver-friendly live-aboards in the world. My "hell ship" image was blasted. The food approached *grand cuisine*. The crew knocked themselves out to serve and help us in every way. Three responsible, well-trained dive guides escorted us through the passes of the Tuamotu atolls safely. No strays were caught in the ferocious tidal currents to be carried far into or out of the lagoons.

With its many rivers, diving around the Island of Tahiti can encounter limited visibility. Tahiti, itself, is also so developed and crowded these days that we hardly recognized it. We couldn't even find the house we lived in when we spent a year there and in the islands 38 years ago. One must fly to Rangiroa and from thence by small plane or boat travel to the atolls of the Tuamotu Islands. We did just that, joining the *Aggressor* at Rangiroa and, in turn, motoring overnights to Toau, Apataki and Fakarava Atolls.

Now pass diving is not for beginners or, for that matter, for seasoned divers without experienced guides. The atoll lagoons are often many square miles in size. Countless millions of gallons of lagoon water flush out with the lowering tide creating millraces with six to eight knot currents. There is no extricating yourself once you stray into the main stream. I have, myself, been caught as I pushed closer from the edge of the current into its full clutch in order to have a better video take of the gray reef sharks that ride the current. Once in the "destructive element" (as Conrad called it) you can only ride with it, hoping that alert skiff tenders will spot your sausage or flag above the five-foot waves when you surface a quarter of a mile into the lagoon.

There is splendid diving on the ocean side and

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around the corners of the passes. Clear water with fine schools of snappers, Pacific barracuda, pennant fish, gaggles of butterfly fish, and turtles feeding on the coral. Single silvertip and gray reef sharks cruise up from the deep for a look at the intruders, and the guides actually located two stone fish; I mean real stonefish, not just scorpionfish. So why hit the passes at all? Sharks, of course. All divers today lust after sharks. The gray reef sharks, beautiful five to six-footers, gather by the countless hundreds in the passes. We had our finest exposure in the pass at Apataki Atoll. There, at a signal from the guides, we used our reef hooks (issued to each diver) to station ourselves as close to the current as we could get and still retreat out of it when we unhooked. Thus hooked in with lines attached to our buoyancy compensators, both hands were free for our cameras.

Howard Hall, with his enormous homemade housing for his high definition video camera, was right next to me. Michele Hall, shooting stills for *National Geographic Traveler* magazine, was over my shoulder and Doug Seifert, one of the world's top shark photographers, was just beyond her. From over our heads the sharks arrived, so dense that they seemed to flow like a gray wave over us and into the trough of the pass. A wall of sharks paraded past us, ten to twelve feet away, apparently effortlessly moving up current, then reversing to flow past us again with the speed of the current. Singles veered closer, inspecting us with baleful eyes. The incoming tide should bring with it clear ocean water and so provide good visibility. Perhaps we were still a little too soon after the tide change; some of the cloudy water, vented from the lagoon, returned with the inflow. Thus only the central body of sharks moving past us had acceptable resolution for our cameras. Even denser masses of sharks created a wall of barely defined gray against the farther side of the pass. My grandchildren would call it "aaawesome!" That, I believe, is a valid description.

And how did my wife of 53 years handle the challenge? Susy is not a diver and hadn't bought a bathing suit for almost twenty-five years. She was inexperienced and uncertified with scuba, apprehensive but determined. Paul Stone, the *Aggressor's* captain and an instructor as well, devoted all his spare time to getting her started. With infinite patience and care – and commendably fast learning for a 74-year-old lady – he got her started. Buddying with him she was able to join us in the pass and experience the great shark parade at first hand. Having survived ordeal by shark without flinching she is now puffed up like a conceited toad. The neighbors have heard no end of it. She's ready to dive the *Titanic*.

A note about the company: it was an all-star cast that none of us are apt to experience again. The guests included Ron and Val Taylor, Howard and Michele Hall, Rob and Cat (of the *Nai'a* in Fiji), Doug Seifert, Greg Stone and his wife from the New England Aquarium, Peter Benchley and his wife, Wendy, plus their two sons. Wendy's sister, Sally and her daughter, Drury, both seasoned divers, all together made up a splendid gathering with enough tall and wild stories to space out a thousand and one nights.

Who says old age is only good for cheese? I can't wait for another decade to reach 90 and go at it again.