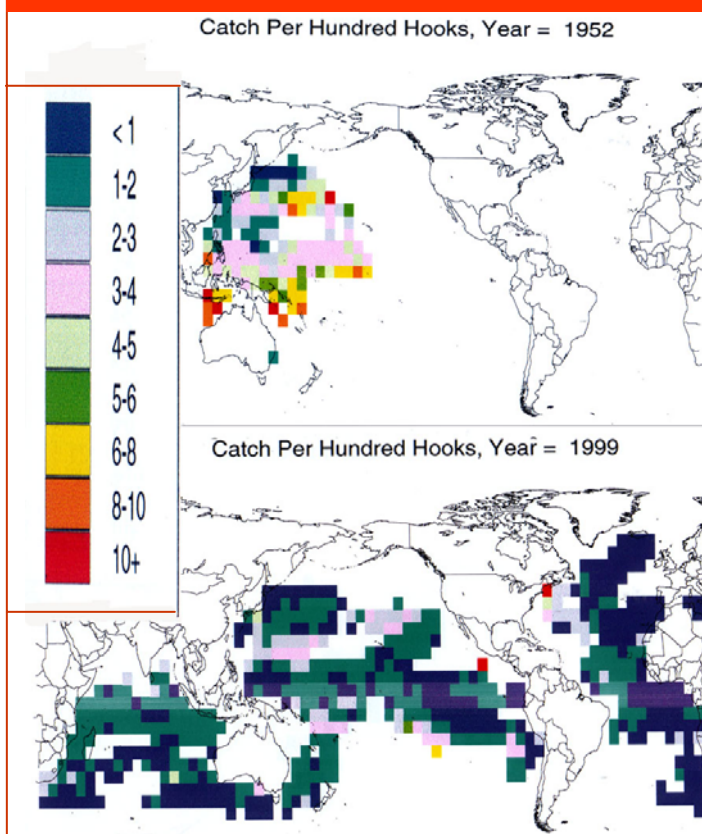


Shark Research Institute Newsletter



Shark Research Institute Global Headquarters
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Ocean Crisis



It took a decade to gather the data from the world's 13 continental shelf and oceanic systems and, initially, even the scientists conducting the study didn't believe the results. First one population of fish, then another, slashed by 90% within the last 50 years. First came blue marlin, then sailfish, then swordfish in the tropical Atlantic. First cod, then flatfish on the Grand Banks. As one species was fished out, the population of another would soar – temporarily – until it too was targeted and fished out.

This scenario was repeated throughout the global ocean, and in every major fishery in the world. Populations of species after species crashed as industrial fishing fleets moved relentlessly through the seas.

Fishing became so efficient that it took a mere 15 years to destroy 80% of a target species, and in some cases entire populations disappeared within just a few years. Much of the destruction is attributed to longline fishing, perfected by the Japanese, in which up to 60 miles of lines bearing thousands of hooks are towed by single boat. In the first decade of fishing the open ocean, catches declined from 10 fish to one fish per hundred hooks.

Ransom Myers, who holds the Killam Chair in Ocean Studies at Dalhousie University in Halifax, and Boris Worm, the Emmy-Noether Fellow in Marine Ecology at the Institute for Marine Science in Kiel, Germany, are the authors of the study that appeared in the May 15 edition of *Nature*, one of the world's most prestigious scientific journals.

Myers and Worm could have concentrated on crashes of local fisheries, rather than on the whole global story. But they knew that denial is no longer an option and unless they drew the world's attention to what was happening, we face a future without fish in the sea. Unless the world stops destroying all of the fish at the top of the ocean food chain, some – eventually all the species – face extinction.

The few fish that we have left are smaller on average, some are half the size and less, of the same species 50 years ago. In the late 1980s it was noted that some populations of sand tiger sharks were breeding at smaller sizes and younger ages than they had before – an indication the species was struggling to survive.

"It's an incredibly important paper," said Jeremy Jackson, a professor at Scripps Institution of Oceanography in La Jolla, California, who has decried the problem of "shifting baselines," in which "normal" is redefined as we become

accustomed to increasingly degraded environments.

The destruction of the fauna of the global ocean is one of the greatest environmental disasters in history, according to marine writer Richard Ellis, and it occurred virtually unnoticed. What were fisheries scientists doing while it was happening? Today's fisheries scientists were comparing current levels of fish to levels that had already been heavily fished out. By contrast, this landmark study made use of data that goes back 50 years, to when the ocean's fish were abundant.

The biological destruction of cod on the Grand Banks of Newfoundland is catalogued in the study. Instead of being reduced to 10 percent of historic populations, like so many other big fish of the sea, cod stocks have fallen to just one percent. Cod stocks have fallen so low that they have gone past the point at which scientists are able to predict what they will do; they may not be able to recover, ever. "We're changing things in unprecedented ways," said Prof. Myers. "The cod was there for more than five centuries and now it's gone."

Although the *Nature* paper has focused public attention on fishing, the study showed that dolphins and porpoises are in trouble too, and some species may not survive this decade. Some shark populations have dropped so low that they are facing extinction. Turtles too, are in danger and Pacific leatherback turtles are on the brink of extinction. Shortsighted environmental policies and pressure from industrial fishing interests have stymied domestic and international efforts to rebuild failing populations. If current practices continue, Myers warns, the world can look forward to serious economic disruptions, food shortages in seafood-dependent developing nations and irreversible damage to marine ecosystems.

The paper chronicles the ecological meltdown of the global ocean. The ocean makes up 70 percent of the surface of Earth. The ocean regulates climate, temperature, humidity, oxygen and carbon systems – it is the life support system of this planet. What happens when that massive planetary regulator is altered this dramatically and this rapidly?

What can we do as individuals? Stop eating seafood. Not just today, but for a few decades, perhaps longer. To restore the fish and therefore the ocean to health, all that needs to be done - is nothing, says Myers. The solution is simply to leave the fish alone and let them reproduce.

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.

BRAZIL: April 25, Felipe Tavares Marinho, 16, was swimming at Rio's Copacabana Beach when his finger was bitten. Next day, fishermen killed several sharks in revenge and one of the fishermen suffered a small laceration in the process.

NEW ZEALAND: On April 27, Alister Kerr, 44, was scuba diving off Stewart Island, one of the Muttonbird Islands in the Foveaux Strait, when his arm was lacerated by a shark.

USA: FLORIDA, Hillsborough County: On March 10, Julie Menke as petting captive sharks at Florida Aquarium in Tampa when her hand was bitten. ***Brevard County:*** April 15, the calf of a swimmer, 20, was lacerated at Cocoa Beach, and the leg of a surfer, 12, was lacerated at North Beach, Patrick AFB. On April 20, surfer Tommy Ryan, 30, was bitten on the foot while surfing at Playalinda Beach. April 24, two people were bitten by sharks: Ralph Sammis, 36, was bitten on his right leg and a surfer, 17, was bitten. ***Volusia County:*** On April 14, Joshua Brust, 22, was surfing at Ponce Inlet when his left foot was bitten. A body boarder, 11, was also bitten on his foot. Next day, Stephen Flowers, 23, was surfing at Daytona Beach when his ankle was bitten. On May 7, surfer Gerald Gaskins, 34, was surfing at Ponce Inlet when his foot was bitten. ***Palm Beach County:*** May 25, the left foot of surfer Kris Kilosher, 18, was lacerated at Jupiter Beach Inlet. ***HAWAII, Kona coast:*** On April 10, the ankle of swimmer Koa Paulo, 20, was bitten and on May 10, a man, 20, was bitten on his calf by a shark.

VENEZUELA: On April 11, at El Yaque beach, surfer Yann Perras, 29, was bitten on his foot.

SRI ONLINE NEWS

This newsletter is published four times a year, but members with internet access can opt to receive our online newsletter twice a month 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.

Albert Andrew Gifford

We are sad to report the death of Albert Andrew Gifford, Director of SRI-South Africa, on April 1, 2003. He will be greatly missed by all of us who were fortunate enough to know him.

A superb and prolific writer, photographer, former aquarium director and CEO, he was SRI's guru when it came to logistics (the word "impossible" wasn't in his vocabulary). Andy was one of the finest champions that sharks have ever had. Some said Andy had uncanny luck with sharks - like the time a raging storm cleared briefly so that he was able to find a whale shark and deploy a satellite tag. Then there was the Swiss television shoot when his team tagged 28 whale sharks (then ran out of tags but not sharks), swam with a humpback whale and calf, and then was visited by a white shark (all of which were caught on film). Andy insisted it wasn't luck. He always said, "Neptune smiles on SRI".

Andy was a rare combination of generosity, brilliance, sheer honesty, scientific integrity, courage and conviction. A fighter who kept fighting the good fight and working against odds that few of us have had to face, he was an inspiration for all who worked with him.

People such as Andy are few and far between, and his passing leaves a gap in our hearts that will never be filled. In living and keeping his memory alive within our minds, we celebrate his life and work.

Andy's son, Grearson Gifford, is now at the helm of SRI-South Africa.

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SRI thanks the following sponsors for their continued support:

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Conservation News


Bikini Atoll

Bikini Atoll, a unique and fragile ecosystem of the Marshall Islands that is known for its beautiful marine life and healthy population of grey reef sharks, *Carcharhinus amblyrhynchos*, is under siege by illegal longline vessels.

Tim Williams of Bikini Atoll Divers reports that longliners have been fishing for sharks in the waters surrounding the atoll for the past 24 months. Since the longline fishing boats moved into the area, there has been an estimated 50 to 60 percent decrease in the population of grey reef sharks. The populations of silvertip sharks, *Carcharhinus albimarginatus*, have also declined.

Williams has requested a formal study and immediate policing action as a response to this infraction of RMS sovereign territorial waters.

Taiwan

The Goblin Shark, *Mitsukurina owstoni*, is a bizarre-looking bottom-dwelling shark of the continental slope; it has a pink body and a long flattened snout. 

The shark is comparatively rare. One was kept in captivity for a week in an aquarium at Tokai University, Japan, and no pregnant females have ever been recorded. Charlott Stenberg (Swedish Board of Fisheries) reports that during the last three months fishermen from northeastern Taiwan have gill netted more than 300 goblin sharks. The nets, set in about 500 to 600 metres of water, caught sharks ranging in size from 140 to 180 cm total length. According the fishermen, most of the individuals were male; the sex ratio was estimated to be 1:10 (F:M). Stenberg also reports that landings of goblin sharks decreased dramatically the past month.

Five Countries Defy CITES

Indonesia, Japan, Korea, Iceland and Norway have taken 'reservations' against the listing of the whale shark and the basking shark on Appendix II of the Convention on International Trade in Endangered Species (CITES). With the exception of Iceland, these countries have also taken out reservations in relation to seahorses. The refusal of these five countries to cooperate with the decision taken by CITES is irresponsible, makes it easier to launder illegally harvested products, and undermines enforcement efforts of the 156 countries that stand behind the CITES decisions.

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Palau's Fiery Message

Photo courtesy Scott Radway



Palau sent a fiery message to fisherman that illegally target sharks in their waters with a bonfire of shark fins seized from a Taiwanese vessel. Palau President Tommy Remengesau, stated, "Our message is very clear. We will not tolerate shark fishing in the waters of Palau."

Like many island nations, Palau has witnessed an increase in shark fishing over the last 15 years as demand soared in Southeast Asia for servings of high-priced shark fin soup. Once considered a dish to mark special events, today shark fin soup is commonly sold in many restaurants. When shark populations are targeted, the entire ecosystem is thrown off balance, and at islands such as Palau – where divers from around the world come to dive with reef sharks – such fishing can devastate their tourism industry.

Last month, the Palau authorities caught the Taiwanese vessel, *Sheng Chi Hui #7*, with more than 1,764 pounds of shark fins in its hold. The vessel was fined almost \$13,000 and the fins have been burned. In the past, Palau disposed of catches seized from vessels caught fishing illegally; the fins were sold and the profits used for law enforcement. Not this time. "Palau is not in the business of selling shark fins, nor do we want to be," said President Remengesau. His administration has a bill pending that will ban shark finning in Palau and raise the fines for targeting sharks and finning to levels that will deter foreign vessels from going after sharks

Expedition Update

SRI encourages sport diver participation in many of our research expeditions. In 2003, spaces are available on the following expeditions:

Utila: (Whale sharks) December 13 to 20.

LaPaz: (Whale sharks and manta rays) September 20 to 27; September 27 to October 4; and October 18 to 25.

The cost of an expedition to Utila or LaPaz is \$1150 per person and includes food, lodging, diving, research materials, and local transfers.

Another expedition to the Galapagos Islands is scheduled for October 30 to November 8.

Spaces are limited and some expeditions require advanced diving skills. For more information or to apply for a space, contact Dr. Alex Antoniou: antoniou@sharks.org or (908) 510-8046.

The Power of Collective Action!

It is often hard for one person to make a difference, but together we have *power*. Take the recent case of MasterCard Hong Kong. As their May promotion, MasterCard (HK) offered free shark fins (buy one, get one free through their merchants). When SRI was alerted, we contacted members online, provided a list of MasterCard's marketing officers, urged them to send protests to MasterCard, then alert everyone in their address books and ask them to do the same. Within days MasterCard canceled the promotion, apologized, and is "considering making a donation to marine conservation."