

# SHARK RESEARCH INSTITUTE NEWSLETTER

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## **New Years Greetings from Japan!**

Senzo Uchida, Director of Okinawa Expo Aquarium, sends Best Wishes for the New Year. He also presented SRI with photos of two of the 207 hawksbill turtles, *Eretmochelys imbricata*, bred in the Aquarium. These are the first of this species to hatch and thrive in artificial facilities in Japan. Senzo also sent photos of a male bull shark, *C. leucas*, born 12 months ago as the result of mating in the Aquarium. Okinawa Expo Aquarium is one of only two aquaria in the world that have successfully exhibited whale sharks.

## **From South Africa...**

Andrew Gifford's article, "Sharks, Fear and the Fish" that appeared in African Wildlife magazine (Vol. 46, No 6, November/December 1992), continues to draw favorable comment. In his article Andrew observed that from 1862 to 1991 there were 51 fatal shark attacks in South Africa, yet 1,770 people drowned along the same coast in 1989. Andrew reports that he recently received a very kind letter from Dr. George Duncan Campbell complimenting him on the article. Dr. Campbell also sent a reprint of an editorial he wrote last year, "The 'Problem' of Shark Attacks Upon Humans," published in the Journal of Wilderness Medicine 4,5-10 (1993). Andrew has donated the letter and reprint to our library.

Andrew also reports that SRI's Whale Shark Study is gathering momentum. Rob Allen, an accomplished spearfisherman, built a special speargun to implant tags on the sharks, and the first whale shark was tagged December 4, 1993 at Cape Vidal. Aerial surveys have begun; the team is patrolling the coast from Durban to the Mozambique border in a Cessna 210. Andrew has acquired a Toyota 4x4 twin cab in order to get the team on site in a hurry and he purchased an UW video camera and lights to record the action!

## **From Brazil...**

Robert Britto (Brazil) sent photos of an enormous white shark captured in the area in which he is working. Roberto has been working for the protection of white sharks for a number of years, and thus his comments are unfit for publication.

### **Public Education...**

Maurice Coutts and Marie Levine are also Fellows of the famed Explorers Club. On November 18, 1993, a meeting of the Philadelphia Chapter of the Explorers Club was hosted by the New Jersey State Aquarium in Camden, NJ, and Maurice and Marie presented videos and slides of their work with various species of sharks.

At 2 p.m. on February 13, 1994, Marie Levine is scheduled to give a Natural History Lecture at the New Jersey State Museum. Her topic: Everything You Always Wanted to Know About Sharks. The Natural History Museum audiences are all-age groups, primarily families. The Museum is located at 205 West State Street in Trenton, NJ. Admission is free.

Marie also been assisting Gavin Owen-Thomas of Survival Africa on a film being shot for the Discovery Channel. The topic: Sharks of South Africa -- definitely one of Marie's favorite subjects!

### **Members' Bookshelf...**

We highly recommend In Search of the "Jersey Man-Eater" by Richard G. Fernicola, M.D. The author has made an exhaustive investigation of the shark attacks that plagued the New Jersey shore during the summer of 1916. 107pp. Order your copy of the book directly from the author; write to him at: 7 Spier Avenue, Allenhurst, NJ 07711. Dr. Fernicola has also produced an excellent video documentary on the same subject titled, "Tracking the Jersey Man-Eater."

### **Did you know?**

Every year five to ten people are killed by sharks throughout the world, but people kill more than 100 million sharks every year. Each year more than three million kilograms of shark fins alone are sold in Eastern countries as the main ingredient of shark fin soup. Human appetites are more of a danger to sharks, than vice versa!

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# SHARKS

## fear and the fish

*Sharks are the most feared creatures of the ocean, yet the chances of being struck by lightning are 1 250 times greater than being killed by a shark.*



*The shark most feared by man, the great white, has gained much of its fearsome reputation from sensational films such as "Jaws".*

photo: M. Anderson-Read

*by Andrew Gifford*

**S**harks range in size from a few centimetres to several metres in length, and vary in shape from what appears to be very ungainly, even ugly, to sleek and streamlined. Found at most levels in the sea, their greatest diversity is on the continental shelves of the tropics. Some species even frequent the relatively shallow waters of river estuaries in the tropical and subtropical regions of the world. With a collective pedigree that extends beyond 400-million years, the shark has evolved into one of the sea's most successful and dominant predators. Dependent on the species, their prey ranges from minute planktonic organisms, large and small bony fishes,

marine mammals and reptiles, to one another. By including dead flesh in their diets, they assist in keeping the oceans clean and clear of carcasses from whatever source.

Yet when a shark attacks a bather or surfer, the degree of hysteria that is generated in the press far outweighs the statistical consequences of its actions. The fact that a surfer or bather may resemble the natural prey of the shark, such as a surface-swimming seal or turtle, is not considered. Any shark that chooses to bite a human intruder into its own environment is given an immediate death sentence by people clearly intent on trying to make the marine environment a safer place for the holidaymakers. In the past massive shark hunts were launched, even though the culprit was probably

long gone and many kilometres away from the attack area.

A review of a few statistics that relate to unnatural deaths and injuries in South Africa should put the shark-attack problem into its proper perspective. According to the latest official statistics 10 691 people were killed on South Africa's roads during 1989, 31 135 were either seriously injured or maimed, and a further 85 157 were less seriously injured. This means that on average 348 people of all ages and races were either killed or injured on our roads each and every day of that year. These same statistics reveal that over a single 12-month period 250 people were killed by lightning, 1 770 drowned, 94 died by what is described as medical and surgical misadventure, 113 were electrocuted, 577 died as a



lations to ensure public safety, and if these are ignored accidents happen and fatalities occur. Yet people venture into the sea to swim, surf and skin-dive either totally ignorant or only partially aware of the inherent dangers that lurk beneath its surface.

The shark is a fascinating predator that is possibly one of the most misunderstood and feared creatures inhabiting the ocean. The film "Jaws" has done considerable damage to its reputation by portraying it as a vicious, calculating and indiscriminate killer, the personification of evil itself. In reality the opposite is true: it feeds only when necessary, does not wantonly kill for the sake of killing and is certainly not indiscriminate in its selection of prey.

Since 1862 only 51 people have been killed by sharks along the entire South African coastline in a total of 373 recorded attacks, which include attacks on boats. It has taken this creature 129 years to achieve the same approximate numerical statistic as the daily average for people killed, maimed or injured on the roads.

Whilst it is natural to fear these fish, the danger that they pose to those who use and enjoy the sea is very small, and to senselessly destroy them and the other creatures that get caught in the shark-nets is ecologically short-sighted. Nobody really knows what damage their destruction is doing to the marine environment as a whole.

Sharks have as much right to life as whales, dolphins and even Man himself. Many millions of years before mankind managed to learn how to walk erect without the use of his knuckles, sharks were cruising the oceans of the world in complete harmony with their environment – which is more than can be said for our ability to conserve and protect our part of the planet. ■

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*TOP: Because it does not have cutting teeth, this ragged-tooth shark eventually swallowed its prey, a young grey shark, whole.*

photo: A. Gifford

*BOTTOM LEFT: Despite its fearsome appearance, the ragged-tooth shark does not pose a serious threat to bathers.*

photo: G. Cliff

*BOTTOM RIGHT: A close-up of the head of a spotted ragged-tooth shark, showing its protruding spike-like teeth.*

photo: A. Gifford

result of poisoning and 478 were killed in falls of various descriptions.

When these figures are compared to the incidence of shark attack along the entire South African coastline over a *ten-year* period, some startling facts emerge. Between 1979 and 1989 a total of 54 attacks were reported. Two people were killed, 37 were injured or maimed and 15 sustained no injury at all. Forty-four of these attacks occurred along the Cape coastline – two in Transkei and eight in Natal. On average, only 3,7 people were injured by sharks on an annual basis. In effect this means that the risk of dying as a result of medical or surgical misadventure is 470 times greater than being killed by a shark, the risk of being electrocuted is 565 times greater, and the risk of being struck by lightning is 1 250 times greater.

Shark-netting, as practised off the Natal Coast, has no doubt made a significant contribution towards reducing the incidence of shark attack, but this diabolically efficient method of killing these creatures is exacting a terrible toll on other marine animals as well. Innocent victims of the shark-nets include dolphins, turtles and large game fish. Dolphins and turtles are classified as specially protected animals because their numbers are diminishing along the Natal coastline. Approximately 1 400 adult sharks are killed in the nets each year. Since they are predators situated at the top of the marine food chain, the creatures that they would normally prey upon and control increase in numbers, causing an escalating disruption down the entire food chain.

While the need to protect bathers from the risk of shark attack is very important, the unnecessary massacre of these and other marine animals in the nets off deserted and off-season beaches is both senseless and wanton. The Natal Sharks Board has the staff and equipment to remove the nets during off-season periods and to refit them when required. By adopting this or a similar type of constructive management programme, the unnecessary extermination of hundreds of marine creatures could be averted.

The Board also has the power to ban bathing on any beach under its control at any time. Bathing could be permanently banned near river mouths, from sunset to sunrise, or when sea conditions such as silt discoloration favour a potential shark attack. Anyone who uses the sea for recreational purposes should be made vigorously aware of these facts. A visit to a game reserve or a wilderness area involves the observance of several rules and regu-

