

Swimming with sharks.(The Last Hunt for Wild Fish)(Cover Story)

by Peter Benchley

Worldwide populations of sharks have been so devastated that some of the 400 known species may already have been compromised beyond recovery. The causes of these near extinctions is attributed to population growth, modern fishing techniques and demand for shark products.

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Two decades ago, *Jaws* gave voice to a worldwide fascination with sharks. But today the fish's population is in decline. Has our fascination gone too far?

Alone, suspended 100 feet below the surface in the Pacific blue. I watched the shark approach. It swam casually, unhurried, serenely confident, ignoring the swarm of little fish that surrounded it. It was a silvertip--a robust, gunmetal-blue female, six or seven feet long a species common here in the waters off Rangiroa, an atoll in the Tuamotu Archipelago of French Polynesia.

As the shark circled. I turned with it, and I saw another in the background, then a third still farther out, and a fourth at the edge of the gloom.

I looked down and searched the water for my colleague, photographer David Doubilet. All I saw was blue, darkening to purple, to violet, to black. I looked to the sides; all I saw was sharks. At last I looked up, and there he was, drifting down upon me, a post-apocalyptic monster festooned with enormous glass eyes, on the ends of spindly articulated legs. (David never dives with fewer than two camera systems, and often four or five.)

We exchanged an "okay" sign; David passed me two cameras to hold and went to work, determined to capture these wonderful animals on film. The sharks didn't leave us, nor did they become aggressive. They simply watched us watching them.

I smiled to myself, recalling my reaction 30 years ago--long before *Jaws*--upon seeing my first shark underwater. I did what most red-blooded American males would have done under the circumstances: I panicked. I waved my arms at the Bahamian guide, grabbed for my knife, exhaled a burst of bubbles, and started for the surface. When I glanced back... the shark had disappeared. I didn't see another shark underwater for three years.

Now, a quarter of a century after the flurry surrounding *Jaws*, David and I were actively, almost desperately, searching for sharks. We had come this far. 4,000 miles southwest of Los Angeles, because we knew from previous visits that Rangiroa was one of the few places on the planet where we could still find sharks in great variety and profusion. We weren't disappointed. Within Rangiroa's

lagoon the second largest in the world, 48 miles long by 15 miles wide, big enough to swallow the entire island of Tahiti we encountered blacktip reef sharks, whitetip reef sharks, lemon sharks, and nurse sharks. We were told that whale sharks were occasionally sighted in the lagoon and that at night tiger sharks came in from the deep to feed.

In and around the two passes that gave the ocean access to the lagoon, grey reef sharks and silvertips gathered to wait for the food provided by the daily tidal rhythms. In deeper water, 200 feet and more down the slope of the extinct volcano of which Rangiroa is the relic, we saw a few great hammerheads--known to locals as toros because of their bull-like bulk--patrolling the blue-gray mist. And offshore, where the bottom drops away into the abyss, the pelagic, or open-ocean, sharks reigned, guarding no territory, exercising rights to the entire ocean realm.

Elsewhere in the world--almost everywhere else, in fact--local populations of sharks have been so devastated over the past 20 years that some of the 400 known species may already have been damaged beyond recovery.

It is a measure of man's recklessness that despite enormous advances in knowledge and understanding since the mid-1970s, no one knows for sure how widespread the damage to sharks has been or how close to oblivion certain species are, including the apex predator among fishes, the largest carnivorous fish in the world (and, of course, the animal that sent my children to college): the great white shark. The only thing scientists can say with confidence is that great whites are in deep trouble; the only thing anyone has so far been able to do about it is to ban direct fishing for them in parts of the United States, a few states in Australia, and South Africa.

The culprits in the slaughter are not hard to find: modern, efficient fishing techniques; hugely increased demand for shark products; a human population that grows by 10,000 every hour of every day; and the overfishing of--and resultant decline in--the fish on which sharks feed.

According to an estimate by the United Nations Food and Agriculture Organization, over the past 50 years the worldwide catch of all elasmobranchs--sharks, skates, and rays--has quadrupled, from 200,000 metric tons a year to 800,000. Most observers think the true figure is at least twice as high. A large percentage of catches go

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unreported. By catch doesn't count, so sharks killed in nets or on longlines meant to catch other animals aren't tallied.

Illegal catches obviously aren't counted either. Several countries ban the odious practice of finning--slicing the fins off living sharks and dumping the animals back into the water to die--but it is common worldwide nonetheless. Fishermen who once released sharks caught on lines or trapped in nets now kill them for their fins.

On the wholesale market in the United States, wet shark fins sell for \$100 a pound, dried fins for twice that much. By the time they reach Hong Kong, shark fins wholesale for \$256 a pound, and the soup derived from them brings \$90 a bowl; in Tokyo, it's \$100. Small wonder that the worldwide harvest and export of shark fins doubled from 1980 to 1990.

Powdered shark cartilage, which is being touted (with practically no empirical evidence) as a miracle cure for, among other things, cancer, sells for \$100 a bottle. Sharkskin watchbands sell for \$75 in the town I live in. Shark livers are used for lubricants and cosmetics and vitamins. Shark teeth become jewelry. Shark hides make excellent abrasives. And it is the sharks' usefulness, naturally, that becomes the death of them.

Precisely how many of the animals have died and how many are left is the subject of endless debate. The World Wildlife Fund guesses that somewhere between 40 million and 70 million sharks were killed in 1994. The International Shark Attack File estimates that for every human being killed by a shark, 10 million sharks are killed by human beings. Simple extrapolation leads to the conclusion that 100 million sharks were killed in 1995, a year in which there were 59 recorded attacks on humans, 10 of them fatal--a number vastly lower than those for deaths by lightning, bee sting, or snakebite.

Whatever the gross figure is, scientists know that in the United States, which is one of the few countries that effectively manage any of their fisheries, the numbers of some species of coastal sharks have been reduced by 50 to 75 percent--one, the dusky shark, by 85 percent--over the past 20 years. Last spring the National Marine Fisheries Service imposed commercial quotas that reduced the legal catch of large Atlantic coastal sharks by 50 percent, to 1,275 metric tons a year. And it outlawed direct fishing for great white, basking, whale (the largest fish in the sea, which can grow to 40 feet), sand tiger, and bigeye sand tiger sharks.

So while it may be illegal to catch a great white on purpose, if one should foul in your net or hook itself on your line...

Furthermore, the quotas don't--because they can't--have any effect on pelagic sharks, which migrate across all political boundaries and thus are vulnerable to fishing and overfishing at every stage of their development.

Sharks are by no means the only pelagic animals under stress. It's estimated that 13 of the world's 17 major fisheries are overfished or in decline. But unlike other pelagics--tuna, say, or billfish--shark populations have a difficult time recovering from overfishing.

Most sharks reproduce slowly, some species only every third year. Some don't reach breeding age until they are more than 10 years old. And many species produce small litters when they do breed. Basking sharks, for example, pup only six offspring per litter. White sharks rarely exceed seven, thresher sharks two to four. The educated consensus is that in recent years sharks, at least off the Atlantic coast of the United States, have been killed off at a rate twice as great as their capacity to reproduce.

One reason sharks have slipped relatively unnoticed into decline is that until very recently they had no constituency. They are not cute like dolphins; they are not smart like whales. They don't sing underwater or suckle their young. Science has largely ignored them, and governments have regarded them, when they've bothered to regard them at all, as an "underutilized resource."

When I began the research for *Jaws*, villainy was all I expected to find. I had read a newspaper item about a man who had caught a 4,550-pound great white shark off Long Island, and I wondered to myself, "What would happen if one of those critters came to a resort community and wouldn't go away?"

Villainy I did find, in books with titles like *Shark!* *Shark!* and *Shark Attack!*, but what I didn't find was more remarkable: There was very little authoritative information available about any sharks, and practically none about great white sharks.

In the 24 years since *Jaws* was published (23 since the movie was released), knowledge about sharks in general, and great whites in particular, has grown exponentially. To cite but one example: Back then it was a given that great whites would intentionally (albeit rarely) target and consume a human being. Now it is widely accepted that sharks in general, and great whites in particular, do not target human beings. When a great white attacks a person, it is almost always an accident, a case of mistaken identity. Swimmers and surfers tend to resemble sea lions, especially when seen from below. (Of course, to the victim of an assault by a 2,000-pound animal, intentions are immaterial.)

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From their throne atop the food chain, these magnificent hunters are vital to maintaining the natural balance in the oceans. As is becoming evident worldwide, without sharks the populations of other animals--for example, pinnipeds such as seals and walruses--tend to explode beyond their ability to maintain themselves.

I couldn't possibly write *Jaws* today. We know so much more about sharks--and just as important, about our position as the single most careless, voracious, omnivorous destroyer of life on earth--that the notion of demonizing a fish strikes me as insane.

Still, I have no sympathy with the few shrill critics who have long asserted that the appearance of *Jaws* abetted the destruction of sharks. I didn't create the human fear of sharks. Nor have individual fishermen contributed much to the decline of any shark species. Furthermore, except for a brief spasm of lunacy during which fishermen exploited the fear by charging hefty fees to take civilians shark hunting, the long-term reaction to *Jaws* has been not hatred but fascination.

Over the years, the volume of mail I receive from children--by now, children who weren't born when the book was published or the movie released--has doubled and doubled again. Without exception, the letter writers want to know more about sharks, want to see sharks, want to become marine biologists or conservationists or researchers.

For a long time I couldn't determine why jaws had taken root in popular culture. Why was there such a fixation on sharks, such an eagerness to be frightened? Journalists, sociologists, and panels of psychologists had been unable to come up with an explanation.

At last I found an answer I could accept, and from an unlikely source: sociobiologist E. O. Wilson. I was reading Richard Ellis's superb book *Monsters of the Sea*, and in a chapter about sharks I found the following statement from Wilson: "We're not just afraid of predators, we're transfixed by them, prone to weave stories and fables and chatter endlessly about them, because fascination creates preparedness, and preparedness, survival. In a deeply tribal sense, we love our monsters."

Love them perhaps we do, but must we love them to death? It seems so, for even in remote sanctuaries like Rangiroa, which is as close to pristine as any island I've ever visited, the end is beginning.

In the deep water not far offshore, the oceanic whitetips and the silkies, the threshers and the makos, are being caught and killed by Asian longliners. For the moment, the

sharks in the passes and the lagoon continue to thrive, but their future, too, is in doubt: Sometime this year (if it hasn't happened already) two 700-passenger cruise ships will begin visiting Rangiroa on a weekly basis. No one can predict how serious the attendant, inevitable damage and disruption--from people and pollution--will be.

Although no one suggests that any species of shark is on the verge of extinction, some fear that a few species might soon become "commercially extinct"--a threshold that, when crossed, signals that there aren't enough of a species left to sustain an industry dedicated to hunting them down and killing them.

The sooner the better, as far as I'm concerned, for then some species may be given a breather, perhaps one of sufficient duration to permit a few normal breeding cycles.

If not, if the indiscriminate slaughter continues, the day could arrive when my children's children, or perhaps their children, will know great white sharks merely as fabled monsters from the distant past, whose existence can be confirmed only by a few scratchy old documentaries and a faded print of a primitive 1975 movie called *Jaws*.