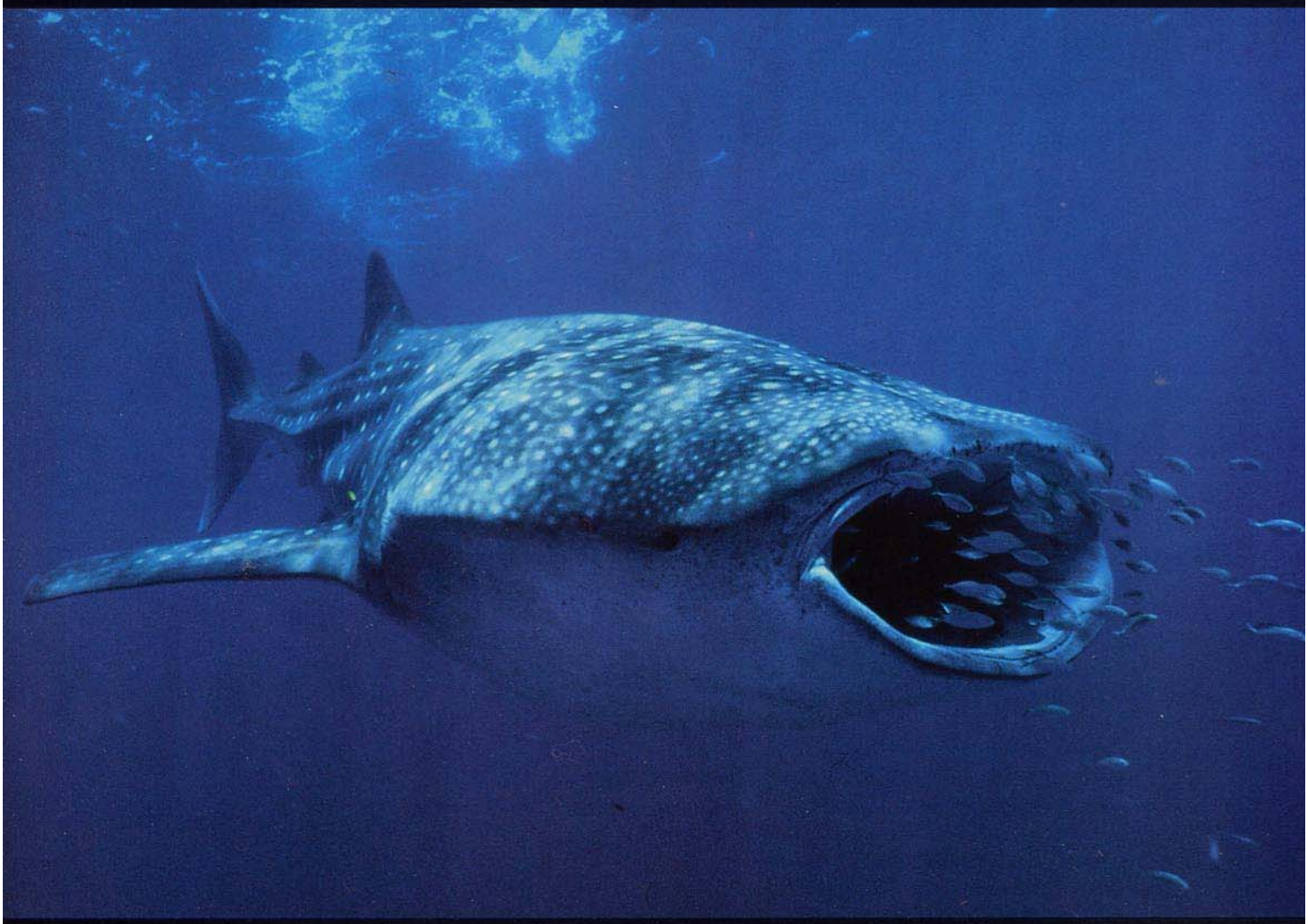
BY PETER KNIGHTS

Sharks At Risk

These misunderstood predators are no match for widespread "finning" and overfishing



A whale shark, the world's biggest fish, filter-feeds on small fish in the Indian Ocean near western Australia.

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SIXTY FEET under the blue Pacific, a glistening silver rocket snaked towards me and, even though I knew it would not harm me, a shiver ran down my spine. Richard, my dive buddy, had warned me, "Hold your breath or your bubbles will scare them away." But when faced with a Galapagos shark in the open sea at eye level for the first time, I felt a pressing need to breathe rapidly. It cruised to within a few feet as I tried to make myself inconspicuous among the rocks. Finally it glided away.

Next a 10-foot hammerhead shark, bizarrely beautiful with its jutting eyes, cruised in from my left. I marveled at the 400 million years of evolution that created such a masterpiece of aquatic engineering and sensory capability.

Then, behind it, slowly emerging from the blue-green abyss, appeared the most stunning creature I have ever seen.

As an undercover investigator, campaigner and conservationist, I have had the privilege of seeing many spectacular animals in the wild. But nothing has moved me so deeply as

being in the Galapagos Marine Reserve and coming face to face with a whale shark – the world's largest fish.

At about 30 feet this was a medium-sized whale shark – they can reach 40 feet or more in length. This female appearing in the gloom, with beautiful leopard-like spots, made an elephant seem small by comparison. I swam alongside and from about six feet away found myself looking into an eye the size of a tennis ball. She lingered and slowly moved towards me. I gently moved back and looked up to check for the diveboat. Another 30-foot gentle giant passed above me. It was an experience I will treasure for the rest of my life.

My work isn't always like this. Unfortunately, much more often I see a darker side of humans' relationship with our fellow species. And there are few darker relationships than those with sharks.

Humans kill at least 100 million sharks every year, and probably many millions more. Half or more of sharks killed are "bycatch," snagged while fishermen are targeting other species on longlines or in enormous trawl nets, gillnets or purse seines. Although global populations are unknown, scientists agree that the numbers of many species are plummeting.

While traditionally shark meat held little value for fishermen, and sharks caught by mistake were often released, in recent decades trade in the animals' fins has increased astronomically the value of the catch. Shark fins, used in the burgeoning and lucrative soup market, have become pound for pound one of the most valuable seafood products. A single bowl of shark fin soup can sell for $100. Tragically, in the waters off the Galapagos Islands, Ecuador, Cocos Island, Costa Rica, Revillagigedos Islands, Mexico and beyond, millions of sharks are now caught, their fins cut off, and their bodies dumped overboard, often while the animals are still alive. Maimed and helpless, the finned sharks sink to the ocean floor and slowly die.

Jaws author Peter Benchley, who is now lending his name to shark conservation efforts, has seen the carnage for himself while diving off the Cocos Islands. "I have seen the bottom of the ocean strewn with finless sharks. [It was] one of the most horrific sights I have ever seen," he says. "The predator is the prey, the villain is now the victim."

At least 400 species of sharks cruise the world's oceans, having evolved tremendous diversity over 400 million years. As top predators in their marine ecosystems, most sharks are naturally scarce. While many fish species may produce thousands or even millions of eggs every year and expect to lose most on their way to maturity, many shark species produce as few as two pups every two years. They may take 20 or more years to reach maturity and can live to 70 years and beyond. For millions of years, while big sharks had few natural predators, this survival strategy served them

A fisherman sorts shark fins on deck in Puntarenas, Costa Rica. This gray

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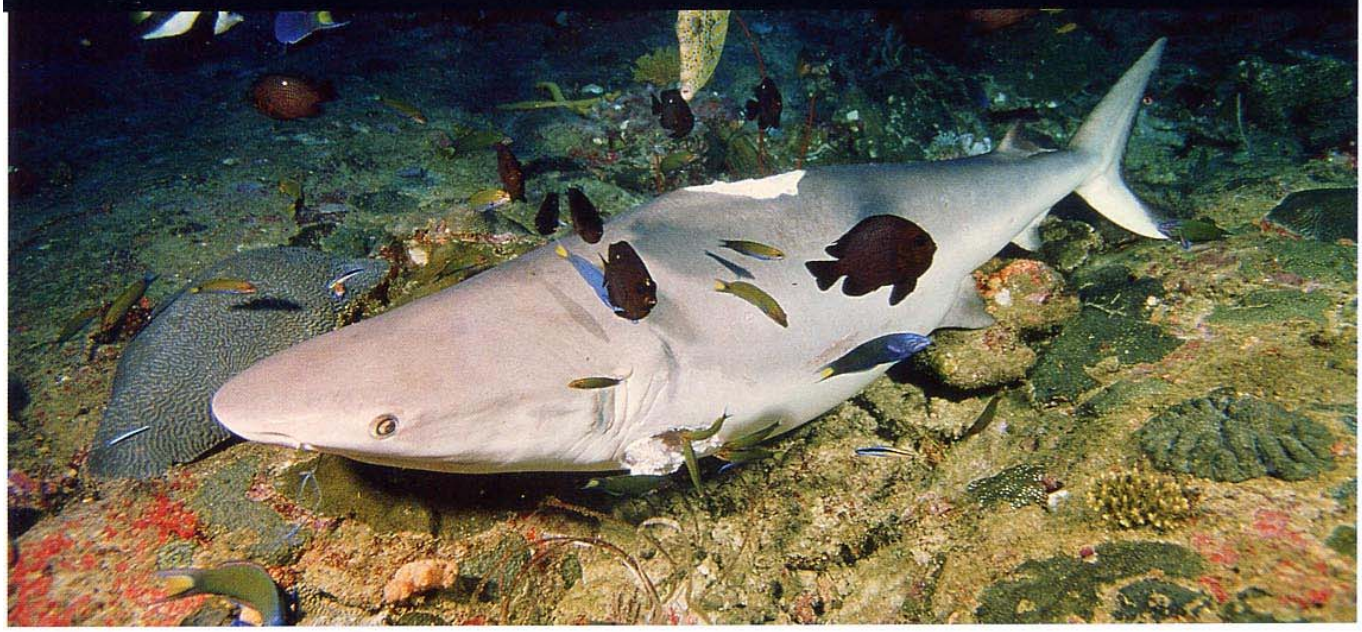
well. But it has made recovery from overexploitation very slow and difficult, if not impossible.

Sharks, like all top predators, play a critical role in keeping the marine food web in balance. Without them, numbers of mid-sized and smaller fish can quickly boom and then crash when their own food supply runs out. Yet despite their importance to the marine ecosystem, and by extension to commercial fisheries, surprisingly little is known about the life history, habits and numbers of the world's sharks, and surprisingly few efforts have been made to reduce catches.

reef shark, like most, did not survive getting "finned." Silky sharks snagged as "bycatch" on a longline off Costa Rica.



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Sensational media coverage, movies and myths have contributed to sharks' fearsome reputation. But no number of razor-sharp teeth or super-efficient swimming technique can protect them from the newest and greatest predator of all time — humans.

Humans today sweep the oceans clean with a dazzling array of technology. Fish-finding sonar, satellite locating systems, 40-mile-plus longlines with thousands of hooks, giant nets, spotter helicopters and factory ships operating 24 hours a day all mean that for many fish, there is nowhere to hide. As Benchley says, there are "too many people with too much sophisticated fishing gear chasing too few fish."

And the demand for fish is insatiable. According to the WorldFish Center, a nongovernmental research organization, average global fish consumption has almost doubled in less than 50 years, and catches would have to double again in the next 25 years to keep up with demand. Instead, they are mostly falling, in some cases precipitously.

Such declines in global abundance spell trouble for sharks, too. As renowned shark expert Leonard Campagno of South Africa's Shark Research Centre says, "Even if we didn't catch a single shark they would be in trouble, because we're catching all their food."

But we are catching them, like never before. In the United States alone, commercial and recreational fishermen reported bringing to shore an estimated 86 million pounds of sharks in 1999. Catch data worldwide are notoriously poor, and much of

the bycatch goes unreported. But even in the United States, where finning is illegal, there is evidence of a thriving shark fin market. Last August, for example, 32 tons of shark fins representing some 16,000-plus sharks were seized by the U.S. Coast Guard from a Honolulu-based boat.

Indeed, although millions of sharks are caught and their meat used, much of the world's catch is fueled by the fin market. The biggest and fastest growing market of all for shark fins is China, though there are huge markets in Japan, Hong Kong, Singapore, Korea and elsewhere. Although the shark fin itself has no taste, only texture, shark fin soup has become a prestige product throughout many Asian cultures. People buy it to demonstrate their wealth or their respect for their guests as one would a bottle of good champagne or a fine cigar. From its origins in southeast China as an expensive and exclusive delicacy, shark fin soup is now ubiquitous at weddings and business dinners throughout Asia and in Asian communities and restaurants worldwide. There are also thriving markets in other shark products such as skin, oil and cartilage, which has gained popularity as a folk treatment, though ineffective, for cancer.

A market displays shark fin products for sale in Kesennuma, Japan, a Pacific coast port and

The deadly market for sharks has caused repercussions across the world. In Africa, many coastal communities that have relied on sharks as a source of protein for generations are in crisis. In Kenya, subsistence-fishing villagers often must import the once-plentiful meat. In India and the Philippines, where whale shark watching has become an important source of tourist revenue, authorities have seen their local populations decline by up to 90 percent. Even though whale sharks are protected in Indian waters, they lose this protection when they migrate into the waters of neighboring countries. Ecotourism elsewhere is suffering as well.

In fact, there is growing evidence of increasing public fascination and concern for shark species. So why is so little happening to stop the destruction? Perhaps it's the sharks' negative image or their historic lack of value as a resource. Maybe it is the difficulty of documenting the abuses and the declines. Fisheries managers and policy makers, citing "insufficient data," often are reluctant to harm the livelihoods of fishermen by imposing restrictions on top of declining catches. But especially in the case of long-lived, slow-reproducing sharks like the whale shark, evidence of a drastic decline probably means that the fisheries will take decades to recover, if they can at all.

Under pressure from environmentalists, governments are beginning to take steps to monitor and protect sharks, with mixed results. Several years ago the United Nations Food and Agriculture Organization (FAO) asked all nations to draw up management plans for their shark populations to protect them from overharvest. Unfortunately the directive has no teeth, and the response has been lukewarm at best. Although 125 nations fish or trade in shark products, only Japan and the United States have developed plans so far, and both favor the status quo.

In 2000 the U.S. Congress passed the Shark Finning Prohibition Act, banning finning or possession of shark fins without the carcass in all U.S. waters, including the Pacific Ocean. Shark finning had been banned under various regulations in U.S. waters of the Atlantic Ocean, Gulf of Mexico and Caribbean since 1993. Australia passed a similar ban in April 2001, and environmentalists have helped persuade policy makers to outlaw finning in places like Costa Rica and recently the European Union. Various other countries have bans on killing

particular shark species. At the World Summit on Sustainable Development in Johannesburg this year, just about the only thing agreed was that fisheries needed to be brought under control globally. But the oceans remain a free-for-all. Even with the political will, no infrastructure exists to enforce many of the laws.

Chen Shui-bian recorded a public service announcement and let it be known that he would not serve shark fin soup at his daughter's wedding. In Hong Kong, the oldest chain of shark fin restaurants recently closed down, citing the economy and the ongoing campaign by environmentalists. In Singapore,

the country's center of fin production. Thousands of blue shark fins laid out to dry in the sun, also in Kesennuma.

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A global coalition of environmental and humane groups including the International Fund for Animal Welfare, Humane Society International, WildAid and Defenders of Wildlife recently won new protections for whale and basking sharks at the November meeting of the parties to the Convention on International Trade in Endangered Species (CITES) in Santiago, Chile. The listing, the first-ever for shark species, will set into motion the monitoring of trade and its effects on their populations and will help control unsustainable harvesting practices.

Despite some gains in policy making, consumer education may be the most effective, and fastest, way to halt shark declines. A series of Asia-wide public education activities have begun to see some results. Dramatic film of finning and hard-hitting advertisements shown around the world seem to be changing minds about the appeal of shark fin soup. In Thailand, a WildAid survey found that 30 percent of people said "no" to shark fin soup following an intensive campaign there. In Taiwan, President shark fin soup has been dropped from many wedding menus, and one couple even tied the knot in a shark tank to publicize their strong feelings on the issue.

Health issues may also play a role in reducing demand for sharks: Recent tests in Thailand found very high levels of mercury in shark fins. The U.S. Food and Drug Administration warns pregnant women not to eat various predatory fish, such as swordfish and shark, because these wide-ranging and long-lived predators tend to accumulate in their tissue high levels of mercury and other pollutants.

But pressure to reduce demand must not let up if global shark populations are to survive and recover any time soon. And governments must acknowledge their role in halting overexploitation of their fisheries. The future of the majestic whale shark and all of her smaller cousins depends on it. □

Peter Knights is executive director of WildAid, an international conservation group focusing on trade, based in San Francisco.