

WHO'S THE REAL KILLER?

Since *Jaws*, Sharks Have Been Considered a Menace, But Overfishing is Turning Humans Into the Real Monsters of the Deep

The numbers say it all. Each year an average of 25 people across the world die as a result of shark attack. You have a one in 300 million chance of meeting your maker in the mouth of a shark. The sharks, on the other hand, wish they had our odds. While U.S. Department of Health mortality statistics show that Americans are more likely to be killed by lightning than by a shark, the Department of Commerce estimates that people kill 100 million sharks a year. In order to keep up with us, sharks would have to eat the entire combined populations of Mexico and Texas every year.

Sharks fall prey to sport and commercial fishing alike, and the one-two punch is having a serious impact on their numbers. Nancy Foster of the National Oceanic and Atmospheric Administration says, "We recognize that shark populations are in need of strong management measures to help them rebound to safe population numbers."

Until recently, sharks were considered both commercially worthless and a menace. In the wake of the 1975 film *Jaws*, there arose a plague of shark fishing contests. In these so-called "monster hunts," fishermen would haul in the biggest sharks they could find. More than just a way to use up their excess testosterone, sportsmen could nab prizes up to \$60,000.

Now the commercial industry is beginning to capitalize on the growing demand for shark products. Almost any large grocery store's fish department has mako or blacktip shark on display. Internationally, the surge in popularity of sharkfin soup in Asia, sending prices for that species to over \$50 a pound, has also increased the shark's



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"Monster hunts" like this one are based on the misguided notion that sharks are evil and should be destroyed.

value. The Department of Commerce reported that the U.S. shark catch skyrocketed from 148 tons in 1979 to 7,144 tons in 1989.

Faced with an animal whose meat barely paid for its processing, some fishermen make the sad decision to take only the valuable part of the fish and dump the rest. The technique is called "finning." A

shark is caught, usually on a long line, and has its pectoral and dorsal fins cleaved off. The crippled fish is then dumped back overboard, where it usually dies quickly. American fishing concerns deny the occurrence of live-finning on their vessels, but *Field & Stream* magazine interviewed Dale Knox, who in 1993 landed a 626-pound tiger shark missing two dorsal fins, both



its pectoral fins and half its tail. When the national press released the story, public outrage was widespread.

Sharks provide a host of consumer goods in addition to their meat. Their skin is harvested for cowboy boots, their eyes are taken for human corneal transplants, their oil is used in Preparation H and their skulls in beauty creams. Trophy hunters are willing to pay \$5,000 for a set of jaws from a great white. But the shark may have more to offer than an assemblage of parts. Most recently, researchers are investigating sharks' resistance to tumors and disease, which may hold valuable clues to fighting such human scourges as AIDS and cancer.

The demand for shark-related products puts far too much pressure on the great fish. In response to the apparent decline in shark numbers, as well as the public outrage over finning, environmentalists and fishery scientists alike started to push for a U.S. shark conservation plan back in 1989. In 1992, the National Marine Fisheries Service (NMFS) released an environmental impact statement entitled "Fishery Management Plan for Sharks of the Atlantic Ocean."

The plan sets the maximum sustainable yield, the most fish that can be landed while leaving a sustainable population, at 8,760 tons for all species of shark. Large coastal sharks, like hammerheads, would comprise only 4,187 tons of the catch. This reduces the allowable take of the most threatened species to almost half of the 1989 catch. The NMFS plan adds that large coastal species have been overfished since 1987, and that other species are seen as being "fully utilized."

Of the 350 species of sharks worldwide, the NMFS plan addresses 73 living in the Atlantic. Acknowledging the lack of information regarding individual species, NMFS simply divides them into three categories: large coastal, small coastal (such as sand sharks) and pelagic sharks (including great whites and blues). Quotas are to be set for each group, and fisheries would be obligated to close when quotas are met. The practice of finning would be banned and a data collection system launched. Commercial outfits would have to apply for a federal shark permit to take the fish to market, while recreational anglers will be restricted to a bag limit of four per boat, per trip.

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Sharks, despite their fierce appearance, are actually quite vulnerable to fishing pressures. According to Gregor Cailliet of Moss Landing Marine Laboratories, "Top predators are not used to mortality threats and do not respond rapidly." The little that is known about sharks points to their slow growth and reproductive rates. The average shark does not become sexually mature for up to 15 years, after which it only bears young every other year. The young suffer an infant mortality rate of up to 80 percent.


The shark shortage has far-reaching consequences. Like lions, sharks winnow out sick and unfit members of prey species, ensuring the reproduction of only healthy individuals. Samuel Gruber of the University of Miami says that sharks "play an important role in the evolution of prey species, taking the sick and unhealthy fish, leaving the more fit to breed." Also, like any other animal, sharks help to keep ecosystems in balance. Florida, for example, is experiencing an explosion in the stingray population—and resulting attacks on humans—in part due to the absence of shark predation.

Sharks are not only graceful and awe-inspiring, but an integral link in oceanic ecosystems. To lose sharks to carelessness and greed would be an inexcusable crime. With continued vigilance in the U.S. and cooperation abroad, these ecologically important and wonder-inspiring creatures may stand a chance of making a comeback. We have nothing to gain from the loss of the sharks, but everything to lose. Contact: National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3232/(301)713-2347.

—Todd Preston



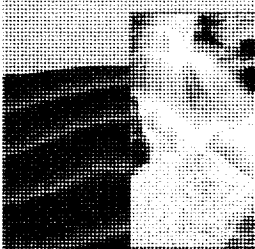
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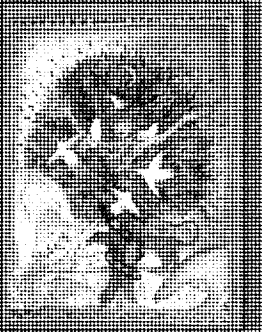
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