



## Shaking up the Shark Fin Trade

Earthwatch scientist Demian Chapman has researched sharks, which fascinated him since his childhood in New Zealand, off the coast of Belize for two decades. He has seen their population get destroyed by the lucrative trade in shark fins.

But soon Belize's sharks could rebound, thanks in part to his work. Armed with creativity and expertise, Dr. Chapman battled to get five shark species protected under CITES—the Convention on International Trade and Endangered Species—which has more than 160 member countries.

### **The Problem: Shark Fin Soup**

The market for shark fins exploded in the 1980s as China's economy and middle class grew, says **Dr. Chapman**, who leads **Earthwatch's Shark Conservation in Belize** expedition. More and more people in China could afford to buy shark fin soup, which sells for about US\$100 a bowl, for weddings, business dinners, and other special events.

More shark fin soup meant fewer sharks. "For a lot of species," says Dr. Chapman, "the fin trade is the key driver of mortality." Without any of these species on the CITES list of animals that can't be caught without permits, the trade went unregulated: "Many populations were just crashing." Because sharks reproduce more like mammals than fish—they breed later in life, have long gestation periods, and produce relatively few pups—their populations can't withstand long-term overfishing.

## **Getting Oversight from CITES**

The research community knew that sharks needed CITES. “It’s really the only tool we have to regulate international trade, and international trade is, for many species, the biggest threat,” says Dr. Chapman. This is certainly true for sharks: just a handful of countries, led by China and Hong Kong, import all of the world’s catch.

But getting sharks recognized by CITES would be a challenge. “The problem with CITES is that species don’t go on because of scientists,” says Dr. Chapman. “You can show that a species needs protection using science, but you have to get two-thirds of the countries to vote in favor. Imagine trying to elect a president in the United States with a two-thirds majority—it would be impossible.”

China and Japan had the most incentive to keep sharks off CITES, explains Dr. Chapman: China because it imports most of the world’s shark fins, and Japan because it has a huge seafood trade, and wants to manage it without international interference. Despite the opposition of these two powerful delegations, scientists did manage to get great white sharks, whale sharks, and basking sharks listed on CITES in the early 2000s. Although this victory opened the door to getting more sharks protected, it had little practical impact: “At the end of the day, these three species are not very important in international trade. They’re a tiny, tiny percentage of the fins.”

## **A Big Bite Out of the Fin Trade**

At the 2010 CITES meeting (a gathering that happens every three years), a group of shark researchers proposed adding five species to the list: three species of hammerhead, the oceanic white tip, and the porbeagle. “Getting these listed would really make an inroad into the fin trade,” says Demian. “For the first time in history, it would be the subject of international scrutiny.”

He says that the proposals were backed up by very strong science and support from many countries. But they were still voted down. “Japan and China showed up in force, and they sold the idea that the shark fins were impossible to identify to the species level,” says Dr. Chapman. In other words, that regulating the trade in these fins would be impossible.

The Chinese and Japanese delegations argued that the customs agents in charge of enforcing CITES regulations could not possibly pick out hammerhead, porbeagle, and oceanic white tip fins from the millions of fins moving in and out of countries. Sure, they could use DNA testing, but that would be too time consuming and expensive. “They really controlled the message on that argument, and a lot of countries believed it,” says Dr. Chapman. “It was a major contributor to the defeat of the proposals.”

## **You’re Going to Know How to Recognize that Fin**

That’s when Dr. Chapman and his wife, Dr. Deborah Abercrombie, also a marine biologist and shark expert, got involved. “We followed the proposals for these particular sharks with great interest,” says Dr. Chapman. “We were horrified when our colleagues told us they were getting destroyed because Japan and China were scaring people with the idea that these fins couldn’t be identified. My wife and I both had learned that fins are not all identical.”

They also knew that you didn’t have to be a scientist to see those differences. Dr. Abercrombie had in fact learned techniques for visually telling fins apart from a fisherman. Shark fin soup is made with fine fibers inside the dorsal fin, which have different textures depending on the species. So

species have different market values—consumers prize some textures, and therefore some species, more than others. Says Dr. Chapman, “Fishermen know exactly what fins they’re looking for. If your livelihood depends on recognizing a fin, you’re going to know how to recognize that fin.” He and his wife (who met each other while working as field staffers on an Earthwatch-funded research project in the Bahamas) set to work creating an **identification guide for the fins** of the species under CITES consideration. With funding from the Pew Charitable Trust and the U.S. government, they tested and refined the guide with fishermen around the world.

“We very quickly realized these fins were pretty straightforward,” says Dr. Chapman. “People could just look at a big pile of a hundred or a thousand fins and pick out the ones from these species in a matter of minutes.”

### **Day of Reckoning: Sharks Win**

Bangkok, 2013: the next CITES meeting. Dr. Chapman and Dr. Abercrombie attended as part of a group from the Pew Charitable Trust. They set up a booth outside the meeting room, so that the voting CITES delegates would have walk by at the end of each day, and stocked it with beer, snacks, and, of course, sample shark fins. “Delegates would come to the booth, have a drink, and then somebody from our team would give them a five-minute presentation on how to identify the fins,” says Dr. Chapman. “I think we checked off the delegation from every single country: even Japan and China came and had a look.”

When it came time for the countries to vote, Dr. Chapman and his team had thoroughly destroyed the “fins can’t be identified” argument. Japan stopped even trying to argue that point. Delegates “saw through it, and in the end, all of the shark proposals went through.”

### **Teaching Shark Identification Around the World**

Now, this husband-and-wife team travels the world to lead workshops for customs agents on how to identify hammerhead, porbeagle, and oceanic white tip dorsal fins. The new trade regulations take effect in September of 2014, which gave countries an 18-month period to prepare.

Dr. Chapman has found training these officials very rewarding. “In every country where we’ve worked, the people on the front lines really want to do it. They know this is going to make a difference. It’s a fundamental shift.” Even Chinese officials, he says, have acknowledged the importance of the move to protect sharks: “They recognize that if nobody wanted these species on CITES, we should have managed the fisheries properly.” They even reached out to Dr. Chapman to schedule training sessions.

Japan is still holding out. They “took a reservation,” which means they refuse to recognize that these species are now protected. But they can only trade products from these species with other countries who have taken a reservation, which will greatly limit their options. They may soon stand alone.

### **Back in Belize: Citizen Scientists Continue to Save the Species**

Dr. Chapman’s success at CITES doesn’t just give these sharks a chance to recover. It also gives Earthwatch volunteers the chance to make an extra impact on shark health in Belize.

Future volunteers who join Dr. Chapman will help him catalog fins provided by local fishermen to track the stresses on the country's shark fisheries. "Belize's interest in shark conservation has skyrocketed since the CITES decision," he says. "All of our work in Belize actually has been raised in profile because they know they have to get serious about shark conservation."

The next conservation goal for shark researchers, says Dr. Chapman, is not to get more species protected by CITES: it's just the opposite. "Hopefully no more sharks will go on CITES," he says, "because that will mean we haven't learned the lesson from fishing these ones so badly that they needed that protection." With his continued research, sharks will stay safe in the ocean where they belong.

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