

The Truth About Sharks

Chapter 1: Sharks and Humans—A Complicated Relationship

In the News

Several events in the summer of 2015 resulted in a renewed focus on sharks. First, film buffs looked forward to the 40th anniversary of the classic shark film, *Jaws*. Based on Peter Benchley's 1974 novel of the same name, the film placed sharks firmly in the collective nightmares of the movie-going public. Second, early in the summer a shark (or sharks) bit two teens while they were swimming just a few miles apart on the same Sunday evening in North Carolina. Both teens lost limbs and some horrified beach-goers demanded that the shark(s) be hunted and euthanized. Others emphasized the need for education about sharks and the risks involved when humans swim in the ocean. Regardless of their individual opinions, everyone was talking about sharks.

Data as Evidence

Although *Jaws* was entertaining, it contained a great deal of misinformation. Shark biologists have spent the last 40 years working to overturn the public's fearful perception of sharks and they have learned a lot in the years since the movie's release.

While *Jaws* characterized sharks, particularly the great white shark, as mindless man-eaters, the truth is far different. Sharks do hunt in coastal waters, but they are looking for fatty marine mammals like seals, not humans. The ratio of bones to body fat in humans does not make a good meal for a shark. Still, sharks are curious and intelligent apex predators that scientists believe may use an investigatory bite to identify objects. When they sense that there are not enough calories in a bite of a human, they let go. They may get confused when there are extra sensory inputs near a crowded beach and mistake a human for their normal prey. Or a shark may need to defend its territory. In any case, scientists believe that most shark "attacks" are actually accidents that happen when humans encounter sharks in the shark's habitat.

At the heart of all the science about sharks is evidence. Scientists are not just animal lovers who believe that sharks are wonderful, but maligned, creatures. They have spent many years documenting human-shark encounters to help further our understanding of sharks. They have radio-tracked specific sharks to learn more about their movements and patterns. The International Shark Attack File is a compilation of all known shark attacks. Scientists administer this at the American Elasmobranch Society and the Florida Museum of Natural History. As the scientists add new data to the file, they expand the evidence that counters the purely negative depiction of sharks in popular culture. Because access to this file is available only to cooperating scientists, and in light of the public's recent interest in shark/human interactions, the Shark Research Institute's Global Shark Attack File is

making its case reports available to anyone with an Internet connection. Much can be learned from the more than 5,700 incidents about shark and human behavior and how to minimize risk while sharing the ocean with sharks.

Further Reading

Even though scientists understand sharks much better today than they did decades ago, many people are still more familiar with the sharks of *Jaws* and *Sharknado* than they are with real sharks. Media coverage of the events of the recent shark encounters in North Carolina emphasizes this dichotomy. You can familiarize yourself with the events of the summer of 2015 by reading news articles and responses from scientists and scientific organizations. You can learn more about shark “attacks” by delving into the data and case reports. To give you a place to start, several websites are listed below.

- [Paramedics called to 2nd shark attack minutes after 1st](#)
- [Effects of Shark Decline](#)
- [Global Shark Attack File](#)
- [The International Shark Attack File](#)
- [Chart: The animals that are most likely to kill you this summer](#) (Note: This is a humorous if not exactly scientific comparison of animal encounters that result in death from the Washington Post. The numbers are not adjusted to include risk relative to number of person-hours spent in contact with the different animals.)

Questions for Discussion

1. What are your feelings about sharks? Where did your attitude come from?
2. Many people consider sharks to be ocean villains. Perhaps for that reason, declining shark populations receive less than adequate attention. How would you address the issue of shark protection with:
 - the 2015 victims of a shark attack?
 - Atlantic bay-scallop fishermen?
 - municipal beach authorities?
3. People in communities around the country complain about deer that eat their gardens or bears that tip over their trash. Tragedies occur on vacations when a moose gores a child or a grizzly bear mauls a camper. Even joggers in rural areas can be attacked by a mountain lion or stung by bees. What is your philosophy about these encounters with wild animals and how does it affect your response to news of a shark attack?

4. Consider this statement: “The reality is that humans are the true top predators of the sea” (oceana.org). What does this statement mean? How do humans affect the ocean ecosystem when they indiscriminately kill sharks out of fear or diminish the shark population for shark fins or in accidental bycatch?

5. After a series of fatal attacks in Western Australia, government officials adopted a policy by which a shark that has attacked a human can be captured and killed. How would you argue against this policy in a public meeting?