

MEPC 2005 Information Sheet

Sharks In Danger?



There are nearly 400 species of sharks in the world. They inhabit virtually all ocean environments — from freshwater lakes and rivers — and range in size from just a few inches to almost 40 feet!

While sharks are often feared as "man-eaters," the truth is that humans pose a far greater



Humans pose a far greater threat to sharks than they pose to us.

A Shark Is A Fish

What is a shark?

When we think of sharks, we usually think of sleek, large species that stalk the seas for fishes and marine mammals. Some do just that. But not all. The huge basking shark feeds on plankton. And the small horn shark crushes and eats clams, lobsters, and crabs. Some sharks are giants — longer than a school bus. Some are tiny enough to hold in your hand. Some spend their entire lives in motion. And some rarely stir from the sea bottom. Yet they are all sharks.

A shark has five kinds of fins.

A shark's tail is called a *caudal fin* and it propels the shark forward. The paired fins toward the front of a shark are its *pectoral fins*, used for lift as a shark swims. The fins on the shark's back are the *dorsal fins*.

danger to sharks than they pose to us.

Threats to shark populations include overfishing, by-catch as a result of fishing operations, and habitat degradation. One big problem: the negative public image of sharks can be quite a challenge to conservation efforts.

Sharks are slow-growing animals that reach maturity only after several years and produce few young. When shark populations become depleted, they may take decades to recover.

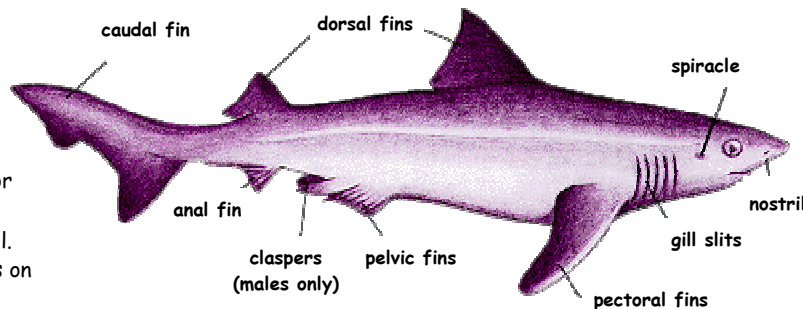
Most of the modern-day shark families lived over 100 million

years ago, when dinosaurs lived on earth. In recent

decades, many shark populations worldwide have suffered severe declines due to overfishing.

Today they are sought for their meat, fins, oil, teeth, hides and even their cartilaginous skeletons.

Sharks are important apex predators that help keep the ocean food chain healthy and need our protection for survival. Are sharks in danger? Yes and if nothing changes, some sharks may become endangered or even extinct in the near future.



The *pelvic fins* are underneath the shark, and the *anal fin* is a single small fin near the tail. Only male sharks have claspers — a pair of organs attached to the pelvic fins.

Sharks swam the sea long ago.

The families of sharks alive now were swimming the seas when dinosaurs roamed the earth! Unlike other animals, sharks have changed very little since then.

Sharks have fish features.

Like other fish, all sharks are cold-blooded. They have a

skeleton and fins, live in the water, and breathe with gills. Most fish in the world are called *bony fish*. Their skeletons are made of bone, as are ours. There are more than 23,500 species of bony fish in the world, but less than 400 different species of sharks.

So what's the difference?

One thing that makes sharks different from bony fish is that a shark's skeleton is made of *cartilage*, not bone. Cartilage is a tough connective tissue.

(continued on next page...)

P.O. Box SS-6257
Nassau, Bahamas
Phone 242-394-2200
Fax 242-394-2244

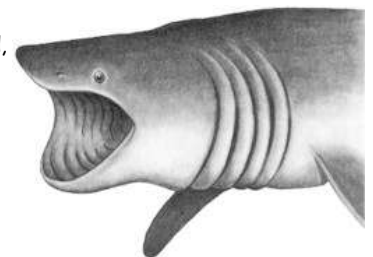
Contest Deadline:
March 31st, 2005

Shark Websites

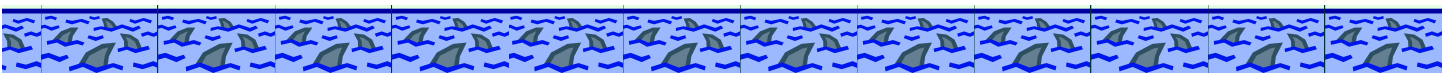
- www.seaworld.org
- www.miami.edu/sharklab
- www.mote.org

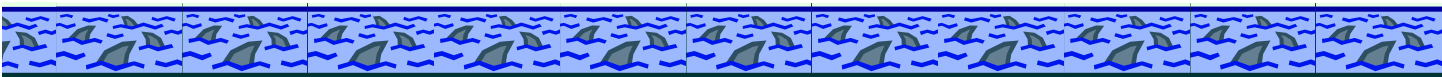
Cool Shark Facts!

- ☺ Do you worry about being struck by lightning? Probably not! So you shouldn't worry much about being bitten by a shark. In your life, you are 50 times more likely to be struck by lightning than you are to ever be bitten by a shark.
- ☺ The number of sharks killed accidentally as bycatch each year is more than the number of sharks caught intentionally by fishermen.
- ☺ Sharks are important apex predators that help keep the Ocean ecosystem in balance.



The huge basking sharks strain plankton from the water to feed.





A Shark Is A Fish (...continued)

We have cartilage in parts of our bodies, too. Push on your nose or squeeze your ear to feel the cartilage.

Sharks have scales?

Most bony fish scales are round, and as the fish grows, so does its scales. You can even estimate how old some fish are by counting their scales, just like counting tree rings.



Shark scales look like miniature teeth.

Shark scales are different. Each one looks

like a miniature tooth. And they have the same structure as a tooth: an outer layer of enamel, a layer of dentine, and a pulp cavity.

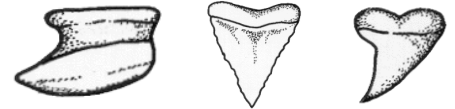
Sharks' scales don't grow bigger as the shark ages. As a shark grows, it grows more scales. These tooth-like scales make a shark's skin rough, like sandpaper.

Sharks have lots of teeth.

A shark has several rows of teeth in its mouth. Sharks bite with the outer row of teeth, but eventually these teeth fall out. A tooth from the row

behind moves up to take its place. Another difference is that sharks grow new teeth all the time. Some sharks may have up to 30,000 teeth in a lifetime.

Shark teeth are specialized for each species' diet.



Basking Shark

Great White Shark

Blue Shark

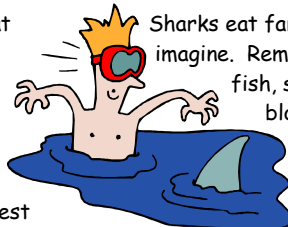
A Shark Is A Predator

What do sharks eat?

Some sharks are not very picky about what they eat but some are. Hammerhead sharks eat mostly stingrays. Smooth dogfish eat crabs and lobsters. Tiger sharks eat sea turtles. Blue sharks eat squids. And whale sharks eat plankton.

Many sharks prey most often on the weakest members of the population. Sharks eat weak, ill, or injured animals because they are easy to catch.

These predators have poor appetites.



Like other wild animals, most sharks would rather avoid you.

Sharks eat far less than most people imagine. Remember that, like other fish, sharks are cold-blooded and have much lower metabolisms than warm-blooded animals like us. Many sharks can even go several weeks between meals.

Sharks don't eat people...very often.

Only 32 kinds of sharks have EVER been known to attack people. Like other wild animals, most sharks would rather avoid you. Sharks that have attacked people probably mistook them for food or may have attacked to protect their territory.

Sharks have predators, too.

Sharks have several predators, including other sharks, elephant seals, and even killer whales.

Sharks Are In Danger!

People are predators, too.

Over the years, people have used sharks for food, medicines, vitamins, weapons, jewelry — even sandpaper. But today some species are in trouble. Why? Shark meat has become a more popular food but there are very few laws that limit how many can be taken.

Each year thousands of sharks are caught accidentally as *by-catch*, snagged in nets set out to catch other types of fish. Fishing nets like purse seines and driftnets make it easy to catch lots of fish. But the nets catch everything that can't swim through the mesh,



By-catch are animals that fishers toss back but most will die.

regardless of species. When the nets are hauled in, fishermen toss back non-target species — by-catch — but most of these animals die anyway. According to the Ocean Conservancy, the

number of sharks killed as by-catch is greater than those taken intentionally!

Finning...what a waste!

Sharks also fall victim to *finning*, the practice of slicing off a shark's fins and tossing its carcass back into the water. Dried fins fetch a high price and are used to make the Asian delicacy shark fin soup. Although shark finning was banned in all U.S. waters and the Atlantic Ocean, finning still occurs legally in most parts of the world and continues to be a driving force for most shark fisheries.

Sharks can't bounce back.

Sharks grow *very slowly* compared to other fish. A female shark produces at most a few hundred pups in her lifetime, compared with millions of offspring produced by other fish. Depleted shark populations may take years to recover.

Researchers tag sharks in order to learn about shark populations.



Go fish — wisely.

The United States is a world consumer and trader of shark meat, including sharks fished from the waters of the Bahamas. Though sharks are protected in the Atlantic, Caribbean Sea and Gulf of Mexico, few international laws are in place to protect these migrating animals. Setting catch limits and preventing by-catch are important to future stocks.

What can we do ?

Conservation begins with learning. Research into shark reproduction helps us understand shark dynamics which helps us better plan for the future of sharks. In some areas, tagged sharks are providing information about growth rates. Once a shark is caught, it is measured, tagged, and released. The shark is recaptured and measured again. The measurements are used to calculate a yearly growth rate. Help take the danger out for sharks: keep the ocean clean, follow fishing laws, keep only what you can eat, and share what you have learned.

