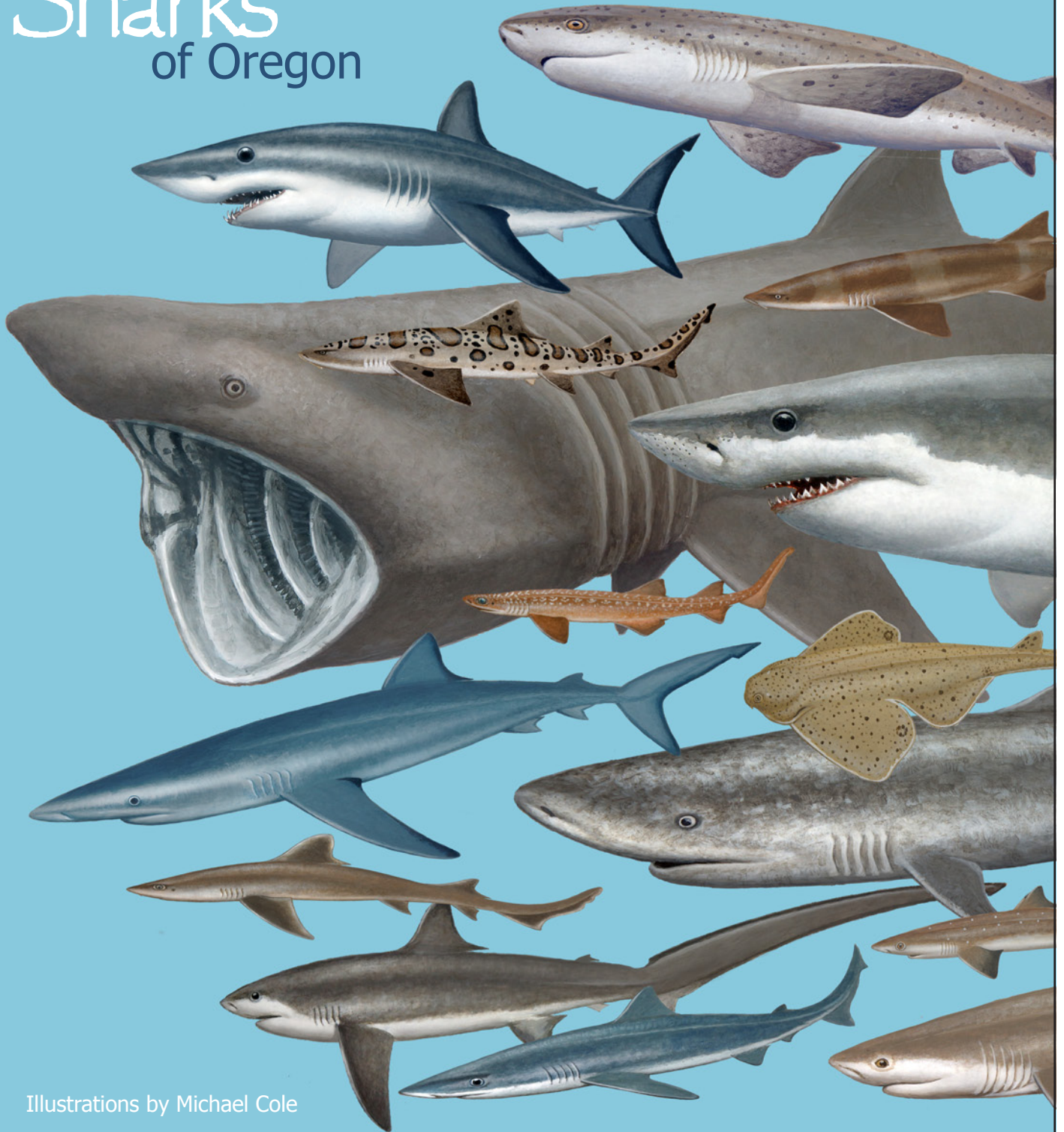




# Sharks

of Oregon



Illustrations by Michael Cole



## Basking Shark

*Cetorhinus maximus*



These are one of the largest fish in the world, second only to their aptly-named cousin, the Whale Shark. Basking Sharks are very unusual-looking, with large heads that are almost completely encircled by gills. As their name implies, they are often found “basking” near the water’s surface, filtering krill and other zooplankton through their gaping mouths. The gills of the shark are lined with cartilaginous structures called “rakers” which help snag and hold food as they sweep through the water. Aside from their great size and large mouths, Basking Sharks can also be identified by a hook-shaped snout and a large dorsal fin that can flop from one side to the other when out of the water. Due to their size and shape, they are often mistaken for Great White Sharks although they are more docile in temperament and do not pose any threat to human beings.

### Range and Habitat:

The Basking Shark can be found in both the northern and southern hemispheres, from the subarctic and subantarctic waters to temperate waters along the continental shelves. Because the sharks follow the ocean’s current, they often migrate over vast distances. Although they spend most of their time in the open ocean, they will venture closer to shore, sometimes even entering bays, as food sources change.

### Status of Conservation:

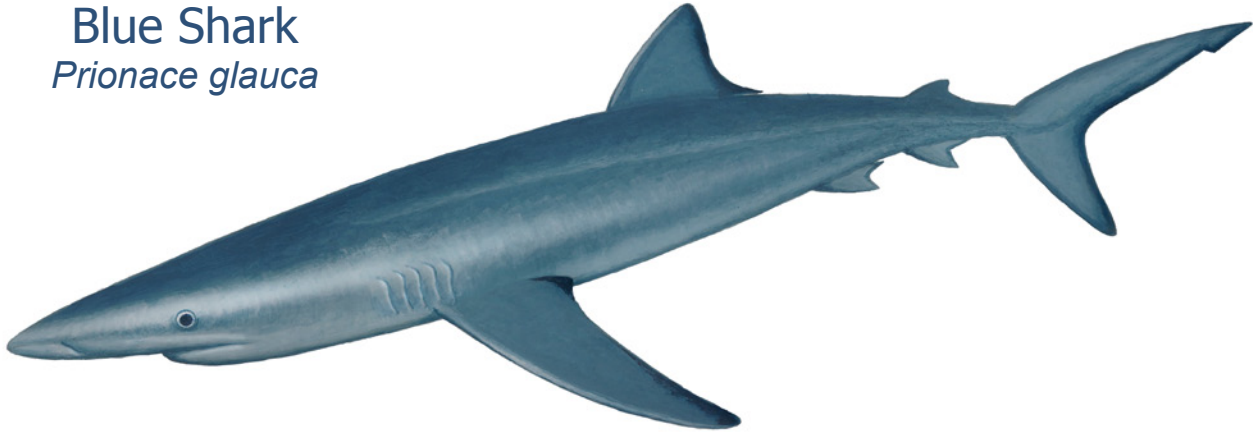
Changes in ocean currents and weather may be encouraging unusual numbers of Basking Sharks to more Southern latitudes, rather than the Canadian waters where they are usually spotted. This may include the coastal waters of Oregon. The National Oceanic and Atmospheric Administration is particularly interested in this shark because it was recently listed as a “species of concern,” a designation that takes it one step closer to being labeled as “Threatened.” Basking Shark numbers are dwindling, despite long-standing and successful prohibitions against hunting them. By better monitoring the big fish’s movements along the West Coast, NOAA scientists hope to better understand their biology and possibly identify new threats to the species. Report your Basking Shark sightings to (858) 334-2884 or (831) 771-4438.

Email: [baskingshark@miml.calstate.edu](mailto:baskingshark@miml.calstate.edu)



## Blue Shark

*Prionace glauca*



The Blue Shark has a narrow, sleek body that starts with a long pointed snout. As its name implies, the shark's skin is a deep blue color along the top of the body and a pale gray on the underside. This coloring is known as "countershading" and acts as a natural camouflage for many fish species that live and feed near the ocean's surface. Blue Sharks feed mostly on invertebrates including pelagic octopus, squid, cuttlefish, pelagic fish and occasionally seabirds. Adult Blue Sharks are rarely hunted by any marine species, although they are a frequent bycatch of the commercial fishing industry. Although they are edible to humans, their meat is not prized and they are usually rendered into other products including fishmeal. It is estimated that as many as 20 million Blue Sharks are inadvertently killed every year by fishermen.

### Range and Habitat:

The Blue Shark has an extremely wide global distribution and can be found in both the open sea and in coastal areas. It can be found all along the Oregon Coast, living near the surface down to depths of 1,148 feet (350 m).

### Status of Conservation:

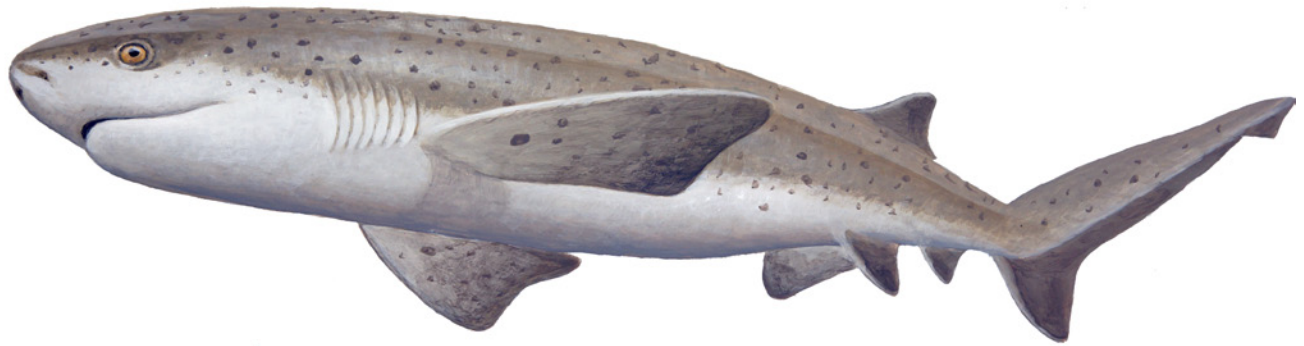
The Blue Shark is currently on the International Union for Conservation of Nature Red List as a threatened species.





## Broadnose Sevengill Shark

*Notorynchus cepedianus*



These large sharks are common to Oregon coastal waters and are the largest shark species to reside in the Oregon Coast Aquarium's Passages of the Deep exhibit and can be distinguished by their seven gill slits (most sharks only have five) and the single dorsal fin located toward the end of their body near the caudal (tail) fin.

Sevengill sharks are often hunted by sports fishermen as they are tenacious fighters. They primarily feed on smaller sharks, bat rays and mackerel.

### Range and Habitat:

This shark primarily resides in the colder waters of the Pacific Ocean from British Columbia to Chile.

### Status of Conservation:

Unknown. There is currently insufficient data on this shark to determine if its populations are threatened. However, because they occupy coastal waters, the Sevengill Shark is frequently caught as bycatch and many are unintentionally killed as a result.



## Brown Catshark

*Apristurus brunneus*



The Brown Catshark is a small animal with a soft, slender body. Unlike many other sharks, it has a delicate skin that can be easily damaged. Little is known about this species, although they are thought to be a solitary and nocturnal species. Like other sharks, they seem to have the ability to sense electrical fields originating from other animals and undersea landforms. This special adaptation seems to aid the animal in both hunting and navigation. They prey on shrimp, squid and small fish.

### Range and Habitat:

The Brown Catshark can be found from the waters of British Columbia south to Baja, Mexico. It prefers to hunt along the muddy ocean bottom at the edge of the continental shelf.

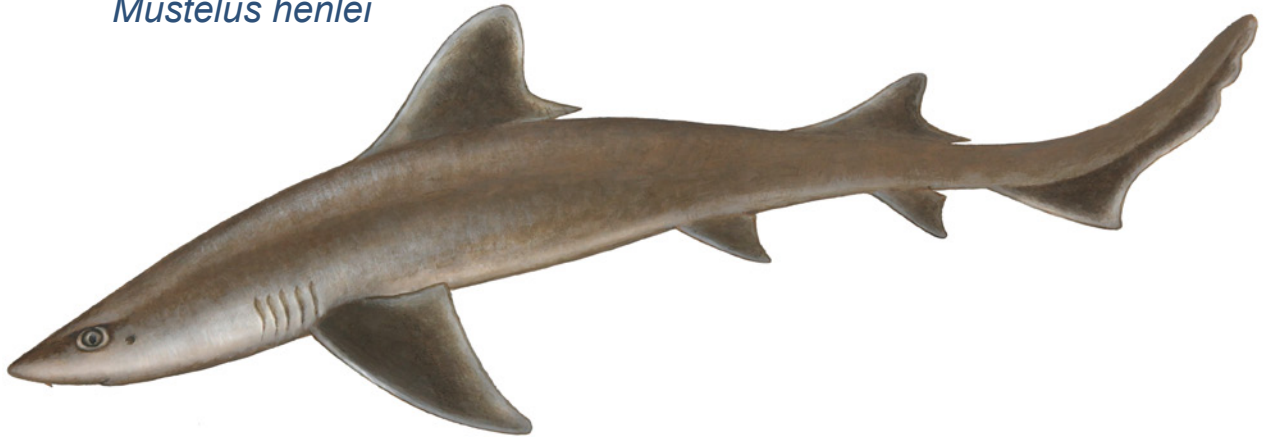
### Status of Conservation:

Little is known about the numbers of this shark, but they are not currently listed as threatened or vulnerable.



## Brown Smoothhound Shark

*Mustelus henlei*



This small shark is identified by its elongated body which tapers dramatically to a slender tail. The skin color is generally brown to bronze, with a silver-colored belly. The shark greatly resembles the Soupfin Shark, but can be differentiated by its second dorsal fin which originates in advance of the anal fin. (In the Soupfin Shark, the second dorsal fin originates parallel to the anal fin.) This shark rarely exceeds 3 feet (.91 m) in length and is generally a bottom-dweller which hunts crabs, shrimps and smaller fish. The Brown Smoothhound shark is often found in bays and is regularly caught by fishermen casting lines from piers or from the shore.

### Range and Habitat:

The Smoothhound Shark prefers bays and sandy ocean bottoms. They can be found all along the west coast of North America from Baja California to northern Oregon. This shark sometimes occurs in a limited range in the coastal waters off South America.

### Status of Conservation:

Common.



## Common Thresher Shark

*Alopias vulpinus*



This is the largest variety of thresher shark in the world, growing up to 20 feet (6 m) from its nose to the end of its extremely long caudal (tail) fin. This feature is the shark's most prominent attribute, but it also performs an important function as the shark can use it like a whip, inflicting painful blows to predators and prey alike. Aside from the unique tail, the shark can be identified by its streamlined body and stubby snout. It is generally gray or bluish-gray in color with a white belly band that extends over the top of the pectoral fins. Although a large shark, its teeth are comparatively small and suited for catching fish. The thresher shark is a docile species and presents little threat to human beings. Conversely, the shark is highly prized by many sport fishermen as it is notorious for the strong fight it will put up when on a fishing line.

### Range and Habitat:

The Common Thresher Shark can generally be found in coastal waters near the surface where schools of fish are plentiful. They are found all along the west coast of the United States and as far south as Mexico. There is another subspecies called the Pelagic Thresher (*Alopias pelagicus*) which is similar in appearance but stays mostly in the open ocean.

### Status of Conservation:

A slow reproduction cycle combined with overfishing may be what caused a rapid drop in its population during the 1980s. Restrictions on over-harvesting the thresher have helped to increase its numbers in recent years, but it is still considered a "vulnerable" species.



## Filetail Catshark

*Parmaturus xaniurus*



This is a small (usually less than 2 feet or 55 cm in length) sleek-looking fish. Catsharks get their name from the way their eyes glow when reflecting light – like a cat’s eyes. They usually have a black or brown dorsal area, with lighter coloration on the underside of the body. Like many other sharks, the females are oviparous, meaning they lay egg cases and the young develop inside. The young swim out of the egg case after about two years.

The animal has several unique adaptations. An enlarged gill region allows the catshark to live in deep ocean areas with low dissolved oxygen levels. It also has a high concentration of squalene in its liver, an organic compound which is lighter than water and helps the shark maintain buoyancy. It feeds on a variety of small fish (e.g. lanternfish) and invertebrates.

### Range and Habitat:

The Filetail Catshark is found along the West Coast from Oregon to the Gulf of California. They are common on the outer continental shelf and upper continental slope at depths from 295 to 4100 feet (90 to 1,250 m). The catshark is regularly caught by bottom trawlers but not utilized in the fishing industry.

### Status of Conservation:

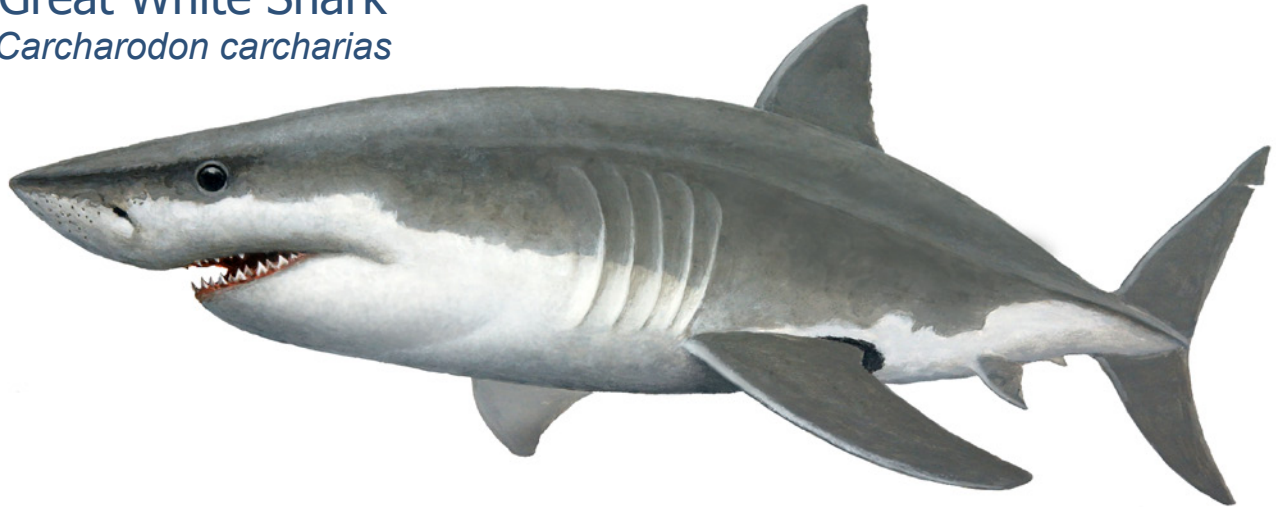
Common.





## Great White Shark

*Carcharodon carcharias*



Few marine animals are as instantly recognizable as the White Shark. Measuring up to 21 feet (6.4 m) in length, they are one of the ocean's largest fish. Their bodies are elongated with a pointed snout, a large dorsal fin and a crescent-shaped caudal fin. The underside of the shark is usually a light grey or white color, accounting for the fish's common name.

Although the White Shark has long been considered a “man eater” among the public, human beings are not part of their natural diet which consists of seals, sea lions, porpoises, tuna, sturgeon, rays, sea turtles and other sharks. Until recently, it was believed that the White Shark had no predators (excluding human beings). New studies indicate, however, that some Orcas (better known as Killer Whales) may actually hunt these sharks. An Orca family group (known as a pod) will usually specialize in hunting a particular type of prey – for example sea lions or fish – in order to keep from competing with other pods. It's not clear if White Sharks are actually a preferred prey animal for shark-killing pods, or whether they are simply attacked and consumed when the opportunity presents itself.

### Range and Habitat:

White Sharks can be found all along the Pacific Coast from Alaska to the Gulf of California. They generally prefer open waters, but will venture into coastal areas to hunt for sea lions and large fish. Although the species has bitten and killed human beings (mistaking a swimmer or surfer for natural prey), such attacks are rare on the Oregon coast. Statistically, there is one shark bite in Oregon waters every twelve years.

### Status of Conservation:

Threatened. Like many of the world's sharks, the White Shark's long-term survival is imperiled due to over-harvesting and prejudice against the species. White Shark body parts are highly prized by collectors and the jaws alone can fetch up to \$50,000 each. In 2004, the United Nations declared the shark “threatened” and moved to enforce international prohibitions on killing them.



## Leopard Shark

*Triakis semifasciata*



Perhaps one of the most strikingly beautiful sharks found along the West Coast of North America, the Leopard Shark is easily identified by the variegated pattern of bars and spots which extend all along its body. This unique natural camouflage helps this shark hide in the dappled sunlight that filters through the offshore kelp forests or along the rocky seabed. Leopard sharks are highly nomadic, often traveling great distances without ever revisiting the same spot twice. They are also a particularly ancient species, with fossilized examples dating back over one million years.

### Range and Habitat:

The Leopard Shark is a wide-ranging animal, found throughout the Pacific Ocean. In Oregon it can be found as far north as Coos Bay where it favors muddy flats and estuaries. It can also be found near kelp forest, rocky reefs or cruising in the open sea.

### Status of Conservation:

Common.



## Pacific Angel Shark

*Squatina californica*



This shark's body is flattened and disk-shaped with broad pectoral fins which resemble angel wings. Although it does have dorsal fins, they are small and located far down the tail. In these respects, it may look more like a ray than a shark. The Pacific Angelshark is a bottom-dweller, often burying itself in the sand to avoid detection by both prey and predators. It can be found at depths up to 3,600 feet (1,100 m). It will become active at night, dislodging itself from the ocean floor to search for fish, squid, octopus and crustaceans. It is actively hunted by other sharks, including the Great White.

### Range and Habitat:

The Pacific Angelshark can be found along the west coast of North America, from Alaska to the southern tip of South America. It is uncommon in Oregon waters.

### Status of Conservation:

Common. A commercial fishery for the Pacific Angelshark began in the 1980s but its numbers appear to remain healthy.



## Pacific Sleeper Shark

*Somniosus pacificus*



This shark's unusual name is derived from its slow, almost effortless movement through the deep, cold waters of its habitat. Although the fish appeared sluggish to early observers, the Pacific Sleeper Shark is actually capable of extreme bursts of speed when pursuing prey or avoiding danger. The shark's ability to pass through the water with little movement or hydrodynamic noise (underwater noise created by movement or turbulence) is a unique adaptation that makes it an effective predator of octopus, rockfish, shrimp, crab and snails. It has a cylindrical body with two dorsal fins of approximately the same size. The shark is usually dark gray or black in color. It grows up to 14 feet (4.2 m) in length.

Although studied in Alaskan waters, there is little data on them from the Oregon coast. The Sleeper Shark has some habits which may indicate it is an opportunistic feeder. The shark will congregate around Stellar Sea Lion haul-outs (areas where the animal goes ashore) and follow the migration routes of the Gray Whale. Since the Sleeper Shark does not actively attack either of these animals, it may be scavenging on the remains of both sea lions and whales that died from other causes.

### Range and Habitat:

The Pacific Sleeper Shark can be found in deep cold waters of the continental shelf (up to 6,600 feet or 2,000 m) all along the west coast of North America. They range as far north as Alaska south to Baja California.

### Status of Conservation:

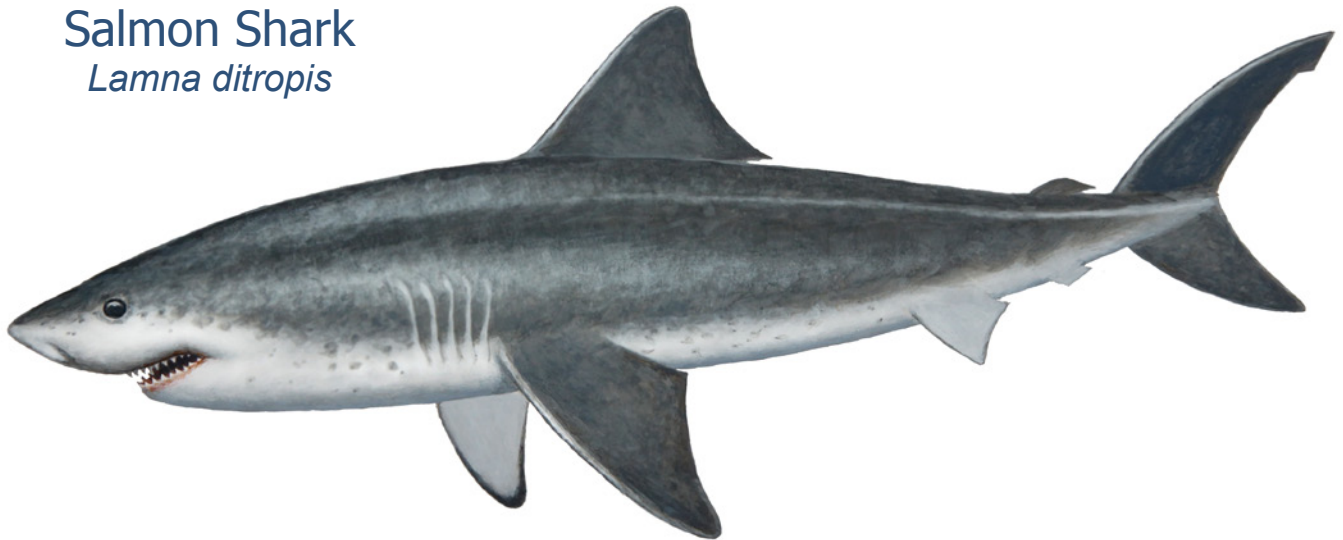
Due to limited data, the Sleeper Shark's numbers worldwide are unknown.





## Salmon Shark

*Lamna ditropis*



The Salmon Shark can be identified by its pointed snout, large black eyes and grey to black body with a light-colored belly. Although much smaller (the largest known specimen was reported to be approximately 14 feet (4.3 m) in length), it is often confused with the Great White Shark. Like the White Shark, this animal is also one of the rare warm-blooded (endothermic) fish in the world. This unique adaptation allows the shark to hunt prey over a wide range regardless of water temperature. As the name suggests, the shark prefers to feed on salmon, although it will also eat squid, sablefish and herring.

### Range and Habitat:

The Salmon Shark can be found in the northern Pacific Ocean from the west coast of North America to the east coast of Asia. It is a common shark in Oregon coastal waters, found mostly in the sunlit zone where its food sources are plentiful.

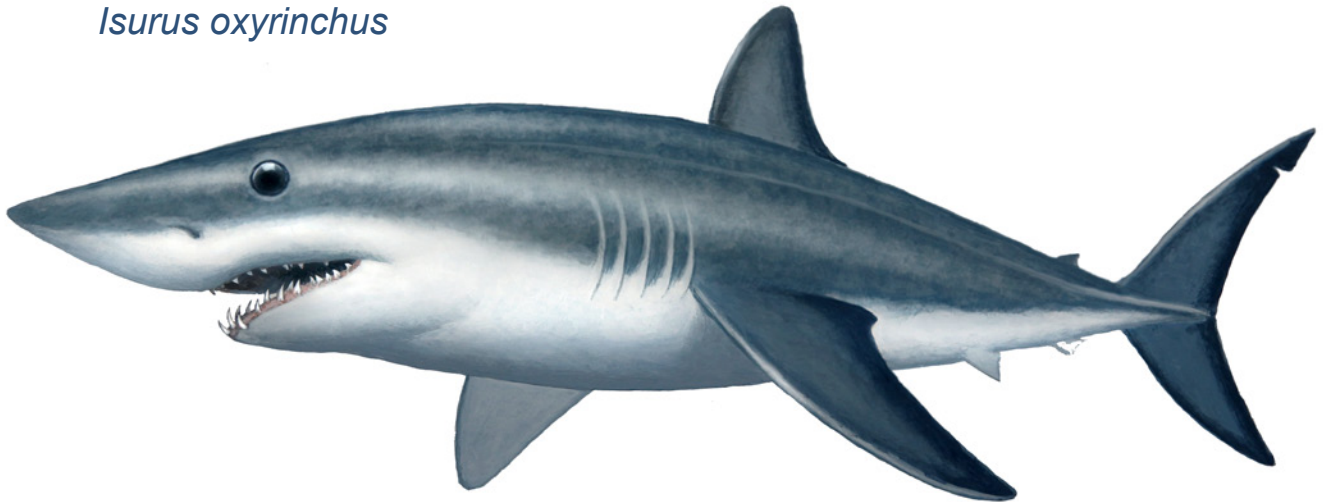
### Status of Conservation:

Common. Although the meat of the Salmon Shark is sometimes consumed in Asia, there is no commercial fishery for this species.



## Shortfin Mako Shark

*Isurus oxyrinchus*



The Shortfin Mako Shark is an unusual species for two major reasons. Along with the Great White Shark, Longfin Mako Shark, Porbeagle Shark and Salmon Shark, it is one of the few endothermic (warm-blooded) species of shark in the world. The Shortfin Mako also has a unique hunting style. The shark will swim below its prey and then ambush it at high speeds at a vertical angle. Using its powerful jaws, the shark will attempt to sever the tail which will incapacitate the other fish. Once the prey animal is immobilized, the Shortfin Mako will continue to make rapid attacks on the body, ripping out large chunks of flesh with each pass.

The animal's speed is due largely to its endothermic physiology which keeps the body temperature stable even as more energy is expended. Some makos have been recorded swimming at speeds in excess of 30 mph (48 km/h), with short bursts of speed up to 50 mph (80.5 km/h).

This shark generally ranges from 7 to 9 feet (2.1 to 2.7 m) in length. Like many other sharks that feed at the ocean's surface, they are "countershaded" – meaning that the top of the body is a darker color than the underside.

### Range and Habitat:

This shark is migratory and can be found mostly in the open ocean off the west coast of North America. Important nursery grounds for the shark are located in the waters off California.

### Status of Conservation:

The Shortfin Mako Short is considered a vulnerable species by most ocean conservation organizations. Although it is often a food source for humans, it is not being sustainably harvested and consumers are urged not to buy or consume this fish.



## Sixgill Shark

*Hexanchus griseus*



The Sixgill Shark looks similar to the Broadnose Sevengill Shark. It has a short head with a rounded snout and a slender body that can reach lengths of almost 16 feet (4.9 m). Their mouths are located on the ventral side (underside) of the body and are lined with several rows of comb-like teeth. This shark has only one dorsal fin which is located about two-thirds down the length of the body. One of the shark's most striking features are its bright green eyes. It has six gill slits (thus its name), which is unusual as most sharks have only five. Because the shark lives at great depths and is a solitary creature, scientists don't know much about it. It is believed that the shark can be long-lived, attaining an age of 80 years or more.

### Range and Habitat:

Sixgill Sharks are deep water animals, usually found at depths of up to 6,000 feet (800 m). They hunt mostly along the sea floor for crabs, rays, fish and various crustaceans. Because of this feeding habit, the shark is sometimes called a "mud shark." The Sixgill Shark can be found in temperate and tropical waters all over the world. Only the Great White Shark is believed to have a wider global distribution.

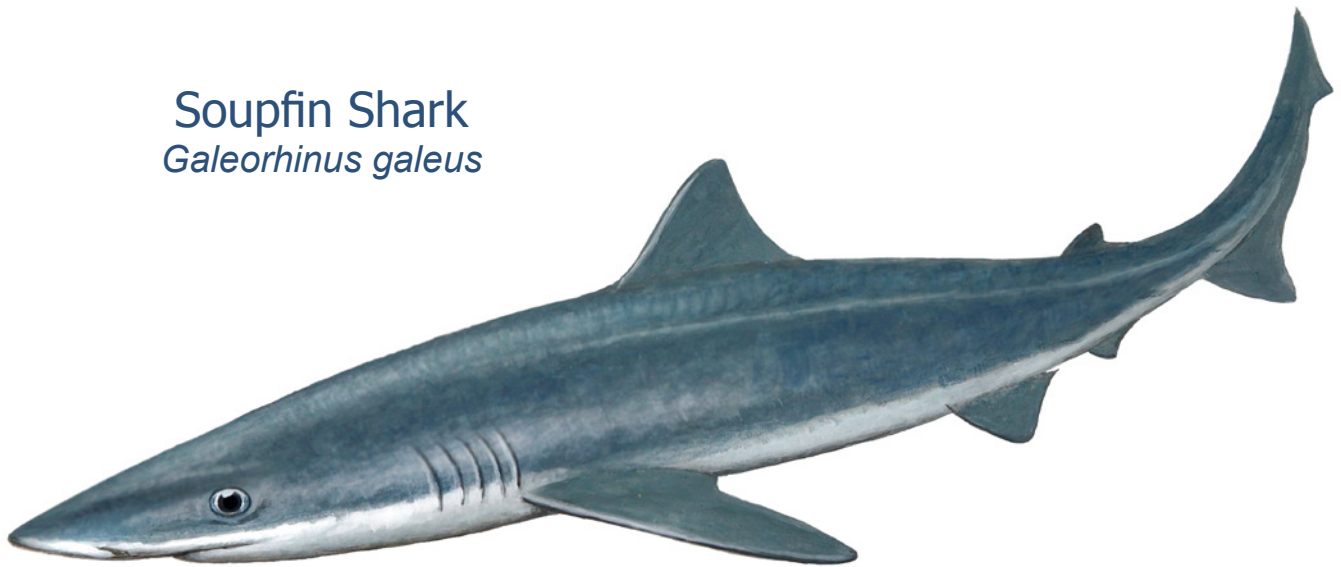
### Status of Conservation:

Threatened. Since they are difficult to find and track, scientists do not have reliable data on the Sixgill Sharks. Because they are heavily fished and have a slow reproductive rate, however, their numbers appear to be in decline worldwide. The Seattle Aquarium is currently undertaking research on this shark species.



## Soupin Shark

*Galeorhinus galeus*



This shark is known by a variety of names, including Tope Shark, Snapper Shark and School Shark. One of the smaller Oregon species, the Soupin rarely grows longer than 6 feet (1.8 m). It can be identified by its long, pointed snout and second dorsal fin which is located above the anal fin. Most of the shark's fins are tipped in black. The Soupin will congregate in schools of up to fifty individuals and has historically been caught in nets by commercial fishermen. Its meat is rich in vitamins, making it desirable in both Asian and European markets. The shark generally feeds on fish, squid and octopus along the ocean bottom or in the water column.

### Range and Habitat:

The Soupin Shark can be found worldwide in temperate waters. Along the west coast of North America, it ranges from northern British Columbia to as far south as Chile. It can often be found swimming just above the muddy sea floor, sometimes in bays.

### Status of Conservation:

Common. As their name suggests, the shark is widely used in Asian sharkfin soup and other delicacies. Due to its slow maturation rate and small litters, the commercial fishing of this species greatly reduced its numbers in decades past. The fish was heavily harvested in U.S. waters starting in the 1930s, but there is little demand for it today. The Oregon Department of Fish and Wildlife currently considers it abundant and wide-ranging.





## Spiny Dogfish Shark

*Squalus acanthius*



This shark species is unusual in two major ways. First, it is one of only two species to have a sharp, venomous spine directly in front of its dorsal fins (the other species with this unusual defense mechanism is the Horn Shark, which is not native to Oregon). The Spiny Dogfish also has no anal fin, which is common on most sharks. Its back is covered in white spots over a gray or brown colored body.

Spiny Dogfish are widely dispersed throughout the Pacific Ocean, often hunting in schools which may include thousands of individuals. Like other sharks, they are opportunistic but due to their relatively small size, prefer to feed on smaller fish, krill, squid and octopus.

### Range and Habitat:

Spiny Dogfish live from the intertidal zone down to at least 3,000 feet (915 meters) and are comfortable in both sunlit shallows and dark ocean canyons. They are very abundant off the coast of British Columbia and Washington, but can be found as far south as Chile.

### Status of Conservation:

Common.