This is a large group of rather “primitive looking” sharks containing at least 80 species worldwide. They are generally characterized by having prominent spiracles, almond-shaped eyes, dorsal fins often with spines, and no anal fin. Most species are small and live in colder or deep ocean waters. This family contains the only species known to inhabit the Arctic seas, the Greenland shark. The spiny dogfish is the most common and well-known species of this family found in South Carolina coastal waters during the winter. Because of its schooling habits, large numbers are occasionally caught incidentally by shrimp trawlers in November and December. They are harmless to man and of little interest to anglers. Spiny dogfish are of considerable commercial importance in other regions of the world.

Spiny dogfish, Squalus acanthias (p. 56)

This is a small group of very unique sharks characterized by a greatly flattened body, terminal mouth, eyes that are located on the top of the head, and broadly expanded, “wing-like” pectoral fins. They are often confused with stingrays. The Atlantic angel shark is the only species of this family to inhabit South Carolina waters, and it is not very common. It lives on the bottom, often camouflaged in the sand or mud, and is harmless unless accidentally stepped upon. Few are caught by anglers in South Carolina.

Atlantic angel shark, Squatina dumeril (p. 58)
Family Ginglymostomatidae  
Nurse Sharks

This group of sharks is characterized by a short, rounded snout, distinct nasal barbels located in front of mouth (often called feelers), small eyes, a fifth gill slit almost hidden by the fourth, a first dorsal fin that originates far back on the body, and a tapering, low profile tail that is not separated into two distinct lobes. These are generally sluggish sharks living on or near the bottom in shallow waters, at times in a resting position. Only one species occurs in the Atlantic Ocean. It is considered harmless to swimmers and divers unless provoked. Few are caught by anglers in South Carolina.

Nurse shark, *Ginglymostoma cirratum* (p. 60)

Family Rhincodontidae  
Whale Shark

The whale shark, the only species of this family, is the largest of all the sharks and therefore the largest fish. Only true whales (mammals) grow larger, hence its name. It is truly a unique pelagic species off South Carolina and entirely harmless despite its great size.

Whale shark, *Rhincodon typus* (p. 62)

Family Odontaspididae  
Sand Tiger Sharks

This group of large “ragged-tooth” sharks is characterized by a pointed snout, long and slender canine-like teeth with lateral points or denticles, a first dorsal fin that originates far back on the body, and a large second dorsal fin that is about the same size as the first. Of the eight species recognized throughout the world, only one occurs in South Carolina waters. It is usually a bottom-dwelling coastal species that can be dangerous to swimmers. Occasionally taken by anglers in South Carolina.

Sand tiger shark, *Carcharias taurus* (p. 64)
Family Aloiidae
Thresher Sharks

This small family of very distinct sharks contains only three species worldwide. They are characterized by an extremely elongated, “sickle-like” tail that is about half the length of the entire body. The tail is actually used in feeding to strike and stun schooling fish. They are generally pelagic with two species occurring in South Carolina. Very few are caught by anglers.

Bigeye thresher, Alopias superciliosus (p. 66)

Thresher shark, Alopias vulpinus (p. 68)

Family Cetorhinidae
Basking Shark

The basking shark, the only species of this family, is second in size only to the whale shark. It is characterized by a pointed snout, an enormous gaping mouth, small teeth, very long gills, and a lunate tail. It is a harmless plankton feeder occasionally seen swimming lazily on the surface, usually far offshore, as if “basking” in the sun. Some ichthyologists place the basking shark in the family of mackerel sharks.

Basking shark, Cetorhinus maximus (p. 70)
Family Lamnidae
Mackerel Sharks

This small group of large, stream-lined, and fast-swimming sharks is characterized by a conical (cone-shaped) head, very pointed snout, relatively large circular eyes for sight-feeding, large gills that allow for more efficient breathing, a small second dorsal fin that reduces drag, lateral keels reinforcing a thick caudal peduncle, and a powerful, lunate tail. Mackerel sharks are widely regarded as having the perfect body design and therefore tend to be a symbol of all sharks. Five species are widely distributed throughout the world, three of which are found infrequently in South Carolina waters. These include the white shark, the shortfin mako, and the longfin mako. They are mostly pelagic, although several white sharks have been caught in nets or by anglers in shallow coastal waters. The mackerel sharks are aggressive top predators feeding on a variety of large prey, such as marlin, swordfish, dolphin, tunas, and other sharks. They are known to be dangerous to man. A few fatal attacks by white sharks on swimmers, divers, and surfers are known to occur around the world each year. The shortfin mako is especially popular among anglers because of its habit of jumping from the water when hooked. The porbeagle shark is found in the colder northern waters from New Jersey to Newfoundland. Only one doubtful record for this species has ever been reported in South Carolina. It is included in this guide only to allow anglers to differentiate it from the mako sharks.

White shark, *Carcharodon carcharias* (p. 72)

Shortfin mako, *Isurus oxyrinchus* (p. 74)

Longfin mako, *Isurus paucus* (p. 76)

Porbeagle shark, *Lamna nasus* (p. 78)
Family Triakidae
Houndsharks

This is a group of smaller, slender-bodied sharks characterized by a narrowly rounded snout, usually small blunt teeth, the absence of spines preceding the dorsal fins, a large second dorsal fin, and a fan-like tail. Of the two species that occur along the Atlantic coast, only the smooth dogfish is common in South Carolina. The Florida dogfish may occur here but only as a stray. Like the spiny dogfish of the family Squalidae, the smooth dogfish is abundant in local coastal waters only during the winter, migrating northward in early spring each year. It often forms large schools feeding on small fish and a wide variety of crustaceans. They are harmless to man and of no interest to recreational anglers. The smooth dogfish is an excellent food fish and the target of a few local commercial markets in winter.

Smooth dogfish, Mustelus canis (p. 80)

Family Carcharhinidae
Requiem Sharks

The requiem sharks or “carcharhinids” form one of the largest and probably most familiar group of sharks. They are widely distributed throughout the oceans of the world and represent some of the most common species in both the coastal and offshore waters of South Carolina. Many of these species are quite similar in appearance and therefore more difficult to identify. The group is generally characterized by a narrowly rounded to broadly rounded snout that is slightly flattened above; broad, triangular, upper teeth that are serrated; narrow lower teeth that are smooth-edged; a first dorsal fin that is located well forward of the pelvic fins; distinct precaudal pits; and a non-lunate tail. They feed on a wide variety of smaller fish, crustaceans, and squid as well as stingrays, turtles, and other sharks. Some species may be potentially dangerous to swimmers because they often occur in significant numbers along local beaches during the summer season. The larger species are generally found farther offshore, while the smaller species are more abundant in the shallow coastal waters of sounds, bays, larger rivers, and along beach fronts. If an angler catches a shark in South Carolina waters, particularly during the summer months, it is most likely one of the carcharhinids.

Oceanic whitetip shark, Carcharhinus longimanus (p. 82)
Sandbar shark, *Carcharhinus plumbeus* (p. 84)

Bignose shark, *Carcharhinus altimus* (p. 86)

Silky shark, *Carcharhinus falciformis* (p. 88)

Dusky shark, *Carcharhinus obscurus* (p. 90)

Night shark, *Carcharhinus signatus* (p. 92)

Tiger shark, *Galeocerdo cuvier* (p. 94)
Blue shark, *Prionace glauca* (p. 96)

Lemon shark, *Negaprion brevirostris* (p. 98)

Bull shark, *Carcharhinus leucas* (p. 100)

Blacktip shark, *Carcharhinus limbatus* (p. 102)

Spinner shark, *Carcharhinus brevipinna* (p. 104)

Finetooth shark, *Carcharhinus isodon* (p. 106)
The hammerhead sharks form a small and very distinct group. They have a strangely flattened and laterally expanded “shovel-shaped” or “hammer-shaped” head, which separates them from all other sharks. At least nine species are recognized around the world, four of which occur in South Carolina waters. They feed on a wide variety of crustaceans, small fish, and squid, as well as stingrays and other sharks. During migration, they are known to form large schools. Several species grow quite large and are considered dangerous to swimmers and divers. Many are caught by anglers each year. For all their alien appearance, the hammerheads are probably the most advanced of all the sharks, followed by the much larger family of requiem sharks.
The following seven species of sharks, representing two additional families, are rare in South Carolina waters. They are generally small in size and restricted to deeper ocean areas far from shore, where they are not likely to be encountered. These species probably feed on squid, crustaceans, and a variety of small fish. Anglers, and especially commercial fishermen, are encouraged to freeze or preserve on ice any specimen they might incidentally catch and provide it to the SCDNR, Marine Resources Division in Charleston. Little is known about the biology and habits of these sharks, so any additional information would be of great value.

**Family Hexanchidae**  
**Cowsharks**

This small group of sharks is recognized by having six or seven gill slits and a single dorsal fin set far back on the body behind the pelvic fins. Reproductive development is aplacental viviparous.

**Sixgill shark, Hexanchus griseus**

**Sharpnose sevengill shark, Heptranchias perlo**
Family Squalidae
Rare Dogfish Sharks

This family is previously described on page 44.

Broadband dogfish, *Etmopterus gracilispinis*

Roughskin spurdog, *Squalus asper*

Cuban dogfish, *Squalus cubensis*

Kitefin shark, *Dalatias licha*

Family Scyliorhinidae
Catsharks

This is a family of small, bottom-dwelling sharks characterized by large oval eyes, two dorsal fins that are positioned far back on the body, and a fan-like caudal fin that is not separated into two distinct lobes. Most species are oviparous.

Chain catshark, *Scyliorhinus retifer*
ANGLING ETHICS

- Follow all fishing and boating regulations.
- Limit the number of fish you kill.
- Carefully release the fish you don’t intend to keep.
- Properly dispose of all litter.
- Respect the rights of fellow anglers by keeping a reasonable distance from other boats.
- Minimize your time at boat ramps to allow fellow boaters equal access.
- Fish on private property only when you have permission from the owner.
- Always conduct yourself in a safe and courteous manner.