

Sharks and Rays: Myth and Reality

Week 4

Overview of Specimen

Dr. Marcelo Carvalho: This is the species that we will be dissecting. This is the common dogfish, also known as the spiny dogfish. Its scientific name is *Squalus acanthius* - it was described by Linnaeus in 1758 - so it belongs to the Family Squalidae. There are 15 genera in the family, more or less, with some 100 species worldwide.

This is one of the most common sharks in the world. It occurs all over the world basically in temperate or sub-temperate waters from depths ranging from 50 to maybe 900 meters. It's a demersal shark, meaning that it lives, usually, just above the ocean floor. It's also the most commercially fished of any shark species. It's commercially fished for its meat and also for its liver oil. In many ways, this represents a typical shark. You can see it has two pectoral fins, which provide some kind of lift when the shark is moving. It has two pelvic fins here in the back, and it has a caudal fin as well. And it has two dorsal fins on top. All sharks of this family have one fin spine preceding each dorsal fin. The head is very sharp here; it's very pointed. This gives the shark some hydrodynamic capacity [ability to slip through water easily, akin to aerodynamic]. The

shark moves by balancing its tail from side to side. As with many demersal, or deep-water, sharks the common dogfish has relatively large eyes and large spiracles. The skin of sharks is covered with numerous small dermal denticles or placoid scales. These denticles are very similar to the teeth in structure. They cover the shark completely from head to caudal fin, also on the ventral side of the shark, and they're very important because they give the shark greater hydrodynamic capacity. The dermal denticles are slightly pointed backwards, and you can feel that by stroking the shark in one direction, it's relatively smooth, but it's not as smooth in the other.