

Sharks and Rays: Myth and Reality

Week 4

Dissection

Dr. Marcelo Carvalho: Here's our dogfish, belly-side up, or ventral side up.

We will be making a very long incision, more or less here, to expose both cavities of the shark. The inside of the shark, we call it, the whole cavity here is the coelomic cavity, which is divided into the pericardial cavity, for the heart, and the pleuro-peritoneal cavity for the digestive, reproductive, excretory organs. This shark, the common dogfish, this one here is about 75 centimeters long. That ruler's 15 centimeters long.

Our first cut will be a transverse cut just above the pelvic girdle. We can feel the pelvic girdle, which is a bar of cartilage that unites both pelvic fins, with our finger. We want to cut above the pelvic girdle. First of all, we use the scalpel to make an incision. After we make an initial incision, we pass on to the scissors. The scissors are good, because when we cut with the scissors, we can point them upwards. We want to make these cuts as deep as possible on both sides. We're going to make another transverse cut below the pectoral girdle which unites both pectoral fins. We can also feel that with our finger; it's a hard bar of cartilage. After feeling where the pectoral girdle is with our finger, we

start making our incision. We don't want to cut too deep because we don't want to cut any organ underneath. The skin and underlying muscles are much thicker here, so we must make a deeper incision. Then, with our scissors, we will unite both of these cuts with a long cut.

It's very easy to cut through the body wall of the shark. We want to try to point the scissors upward, so that we're not cutting any organ underneath. I can feel the tip of the scissors just underneath the peritoneum [a membrane] lining the coelomic cavity.

Once we have made our cuts, now we're ready to open up both flaps of skin to reveal the internal cavities of the shark. Now we can actually anchor the skin flaps on the side of the shark.