



**NOAA Teacher at Sea
Heather Diaz
Onboard NOAA Ship DAVID STARR JORDAN
July 6 – 15, 2006**

NOAA Teacher at Sea: Heather Diaz
NOAA Ship DAVID STARR JORDAN
Mission: Juvenile Shark Abundance Survey
Day 3: Saturday, July 8, 2006

Science and Technology Log

This morning we set a special line for the Swordfish Feasibility Study. This study is actually being conducted by Dr. Heidi Dewar, who has been researching sharks and other aquatic species for more than 14 years.

The purpose of this study is to see if swordfish can be caught using the shark sampling gear and handled safely for biological studies, such as tagging and sample collection. To do this set, we used the same basic setup as we did with the sharks, with a few differences. First, the lines

are made of monofilament instead of steel. Second, the hooks are kind of curved, instead of being just regular “j” hook-shaped. Third, the bait used is squid, and each hook is baited with 2 squids (which have been frozen and thawed out, much like the mackerel). Fourth, the leader lines also have a “Chemilure” on them, which is basically a light stick. We have used yellow and green light-sticks. These light-sticks are clipped on the line near the bait, since swordfish will be attracted to the light.



A Mako shark is being processed in the “cradle”. Stephanie Snyder injects a Mako shark with OTC (oxytetracycline) which will act as a staining agent to help in identifying the age of the shark once it is caught. The OTC will also act as an antibiotic, though that is not the intended purpose of it. Rand Rasmussen covers the shark’s nose, mouth, and eyes to keep the animal calm, and to prevent injury. Dr. Russ Vetter (top left) holds down the tail of the shark to prevent the animal from thrashing.

A group of volunteer scientists set the lines at 3 am. Then, the whole crew got up to haul in the lines at 6am. We didn't catch any swordfish, but we did catch 1 blue shark and 1 pelagic ray.

Around 8am, we set the shark line. We hauled in that line around noon. We caught 2 blues and 2 makos.

We had our abandon ship and fire drills today. For the abandon ship drill, I had to get my survival suit from my room, along with my hat. I was already wearing a long-sleeve shirt and pants, so I didn't have to bring those. I also had to put on a life-vest. My meeting location was the second boat. During the fire drill, all the scientists had to meet in the aft lab. Afterwards, (he's not an officer, but a civilian employee) 2nd Mate, Richard (Pat) Patana, gave us a speech about safety and he went over all the rules and procedures for both types of emergencies. It was very interesting to hear. All of the crew members are actually trained in fire procedures, and they wear the same gear that a fireman on land would wear. They are also trained in water emergency procedures, and they have been trained to "plug" and repair breeches in pipes and the hull of the boat, if there is ever a need.

Around 2pm, we set the shark line again. We hauled in that line around 6pm. We caught 5 blues, 1 mako, and 2 pelagic rays.

Personal Log

During our last set, we accidentally lost a buoy. I think it came unclipped from the line. So, Chief Boatswain, Chico Gomez and Ordinary Fisherman Ryan Harris got the skiff down to go and rescue it, of course they couldn't do it until the entire line had been set! So, around 3pm, they asked me if I would go with them. YEAH! Actually, two other scientists were able to go with us (Karina DeLaRosa-Mesa and Daniele Ardizzone). It was a little scary climbing down off the boat because the ladder was a bit crooked. However, it was safe, and everyone was able to get down without much difficulty. We were able to go about 2 miles out away from the ship...which looked like a tiny little boat from so far away. Unfortunately, I couldn't bring my camera because we all got really wet. On the excursion, we saw a mola up close, it was right off the bow of the skiff...I could have touched it, but when we got close enough to reach out for it, it dove under the water and out of sight. They are really strange looking. After about 30 minutes, Chico Gomez spotted the buoy and I got to reach down and capture it and pull it aboard. That was cool. We made it back to the ship just in time for dinner.

Unfortunately, our foam floated away before anyone could catch it. They will need to go back and look for it later. Dr. Rachel Graham was helping Dr. Suzy Kohin "process" the fish and accidentally smacked herself in the cheekbone with the bolt cutters. It swelled up into a goose-egg. It looks like it really hurts. The OOD, Sean Finney, came down to take a report. But, no medical report was filed after all since it was not a serious injury. Dr. Rachel Graham is ok, but her cheek is bruised and she has a black eye. She was able to laugh about it later, but everyone feels very badly that she got hurt. We will all have to be extra vigilant to try to avoid further injuries.

After we finished our haul, the crew decided to go and look for the foam, which took us way, way, way off course. But, we looked until the sun went down and couldn't find it. I personally think that the trawler that was near us when we lost it picked it up. At least, I hope so!

Two Baleen whales were playing not too far away from the ship today! They hung around for about an hour, of course every time I got my camera out, they would go under the water. And, I don't think I was fast enough to get a good shot of them. It was very neat to see the plume of water blast out from the surface of the water, and then we could see them roll gently in and out of the water. They are such graceful animals. I would love to get to see them a bit closer!

The air is very crisp and it smells fantastic. The gentle rolling of the ship over the waves is very relaxing, and everyone has said that they have never slept better than they have the last few days! I am looking forward to a nice sleep, and another exciting day with the sharks!