



**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 5: Monday, July 10, 2006

Science and Technology Log

One team of scientists set a swordfish line at 3am. We hauled in the swordfish longline at 6am. We caught one pelagic ray.

We set the first shark line at around 8am, and hauled it in around 12pm. We caught one blue shark.

We set the second shark line at around 2pm. We let it soak an extra hour, and hauled it in around 6pm. We caught one Blue shark, four mako sharks, and one pelagic ray.

I had an opportunity to take a tour of the engine room with 1st Engineer Chris Danals. We first visited the aft work room. Chris is crafting a wooden boat by hand! It is very neat looking. He said that he builds boats for fun. He showed me the rudder room, and it's amazing to see how huge these two rudders are! They control the rudder from the Bridge. In front of the aft work room is the engine room, which you have to climb down a ladder to get into. The noise is so loud that it is deafening, even with earplugs in. He explained that there are two main engines, which are White Superior engines. The port side engine is used to power the winch, which we use when we set/haul in the lines.



This is one of the Mako sharks that we tagged. You can see the "spaghetti" tag (the yellow one on the left) and the OTC tag on his dorsal fin. After we released him, he came back to see what we were doing on the platform. Mako sharks will usually dive down deep once we release them from the cradle, but this little guy wanted to come back for one more look.

The starboard engine is the one we use to power the ship. He said that the engines are diesel engines, and they get about 1 mile to the gallon. Chris also explained that even though the computers monitor everything in the engine room, they still have to monitor all of the engines in person during each watch. The engines are huge, each one being at least 6 feet tall and at least 15 feet long. But, as Chris explained, it takes a lot of power to move a ship this large through the water! The ship's top cruising speed is 10 knots, but he said we often travel only a few knots, especially when we are setting a line or hauling a line. And, there are times when we are not moving but a few feet per hour, while the longlines are soaking.

Another thing that Chris explained was how the ship makes water. Since they can only bring a finite amount of water with them to sea, they have to rely on other methods to get fresh water once they are at sea. He said that they pump sea water in, then they use heat to separate the fresh water from the salt. The only problem is that sometimes we aren't moving, and the engines need to be hot in order to make water.

Personal Log

This morning we were kind of between 4 islands: Santa Cruz/Anacapa, Santa Barbara, and Catalina. I think we are headed west today. You can't see land anymore, and the waves have become much more intense...several stomach dropping waves this morning and last night. It is very foggy today, and it is quite cool outside. It actually looks like it might rain.

Everyone was a bit disappointed when our first two hauls yielded only 1 animal each. But, the last set was better, and everyone is looking forward to seeing if the blocks farther out might have better luck.

The real treat today was a California sea lion (which has been named Eddie). He was following us after the last haul, eating the mackerel that we were discarding. Eddie followed us for about 15 minutes, he was quite happy and kept coming up to the surface to look at us and blow water out of his nose. He was so cute! Of course, since we had been having bad luck with the sets, I did not bring my cameras downstairs, so I missed getting a picture of the whole thing! I am hoping that "Eddie" will come back tomorrow!

During the night, they had to sound the fog horn several times to alert other boats that we were in the area. I thought it was the general alarm at first, but then I realized that it was just fog.