



NOAA Teacher at Sea
Elizabeth Eubanks
Onboard NOAA Ship DAVID STARR JORDAN
July 22– August 3, 2007

NOAA Teacher at Sea: Name

NOAA ship DAVID STARR JORDAN

Mission: Catch rates of pelagic sharks comparing J hooks to Circular hooks in support of The Relative Abundance of Sharks Survey

Date: Day 1, July 22, 2007, Sunday

Pacific Ocean - ~ 65 miles West of San Diego passed Catalina Island and south of San Clemente.

Weather Data from the Bridge

Air temperature: 18 degrees C

Sea Temperature at 250 m below: 8.6 degrees C

Sea Temperature at surface: 20 degrees C

Wind Direction: 240 (W)

Wind Speed: 7 kts

Cloud cover: – full cloud cover – Stratus

Sea Level Pressure: 1013.8 mb

Sea Wave Height 1’

Swell Wave Height 2’

Science and Technology Log

I boarded the NOAA ship David Starr Jordan at 0800 (everything is in Military time here). Rob, my husband, was with me and he was permitted to board the ship to look around and help carry my bags into my room, so that was a nice start. We departed at 0900 and I watched the dock where Rob was, until he became a little dot. As we were leaving we passed the Naval base where they train the seals and then an area where there tons of submarines. I got a kick out of the seal lions as they relaxed on buoys. After ~ an hour at sea, I couldn’t see land anymore – very strange!

We had a meeting at 10:30am, we got instructions for safety, rules and regulations and a tour of the ship. One rule is that you cannot wear open toed shoes.

We ate lunch and then set lines at 1:30pm to try to catch sharks.

Background info: NOAA Ship DAVID STARR JORDAN is on its 3rd leg of travel this summer. The first 2 legs involved study of Shark Abundance (how many sharks there are). The study that we are doing now is designed to enhance the Abundance study. The scientists are trying to determine which type of hook will catch the most sharks, the J hook or the Circle hook. – Hint a great PROBLEM for this “lab” would be: Which hook, the J hook or the Circle hook will catch more sharks? *What is your hypothesis?*

Although this is the main point of the experiment, they are recording other data as well, which I will list later.

I mentioned earlier that we were setting lines. Setting the lines, involves a very long line – 2 nautical miles long and every 50 ft a hook is attached. And after 5 hooks are attached a buoy is attached. Can you picture this? So once all the lines are set, there are approximately 200 + hooks attached.

To make this test a good one reducing variables, every other hook is J hook and then the next hook is a Circle hook.

I will talk more about line setting and hook attachment later.

Tonight was so exciting. When we pulled in our lines at 5:30pm, we got 4 sharks: 2 Blue and 2 Mako and 1 **pelagic** Stingray. It was so thrilling to hear the crew screaming “Shark!” And instead of the traditional running or swimming to get away from the shark, the shark is pulled in and touched. Scientist Russ Vetter had his head so close to the

shark’s head, it made me shiver. When I asked him how many times he had been bit, he stated that you only get bit once.

The Blue sharks were absolutely beautiful and for those of you know me well, it isn’t just because they are blue! But the blue color of these sharks is absolutely

spectacular—it takes your breath away. The other thing that took my breath away this evening was the 160cm Mako shark. It got hooked in the fin, so it was harder to pull the shark in for data and boy did it give an impressive fight.



Scientists Suzanne Kohin and Russ Vetter stabilize this 160cm Mako shark, while Grad student Heather Marshall brings tools to collect data.

Although, this part of the work is finished there is still a lot going on. We have to prep tags and lines and scientist are all around me now recording data about the ocean. Right now it is 8.6 degrees C at 250 m down. But on the water surface the temp is 20 degrees

C. The surface (at the top) of the water is actually a little warmer than the air temperature right now. I also hear talk of late night fishing for rock fish and squid.

Personal Log

I have been at sea for a grand total of 12 hours now and so far so great! Everyone has been extremely kind and helpful. I am sure many of you are wondering if I have gotten sea sick and the answer is NO and I don't plan on it. I took Dramamine and chewed some



NOAA Teacher at Sea, Elizabeth Eubanks, standing in front of the majestic NOAA ship DAVID STARR JORDAN in the San Diego Harbor.

ginger gum before the ship left. After about an hour on the ocean I started to feel tired and little like I was floating on my legs. I am not sure if this was due to the ocean waves or the drugs! After lunch I went up to the very top of the ship and took a long snooze.

One of the emails I had received prior to the cruise said to bring snacks, so I wasn't sure what the food situation would be, but I can

tell you this- I won't go hungry! They serve buffet style with many choices and snacks in between. You will also be happy to know that they have lots of veggies on board!

Please direct your emails (questions for me and answers to my questions) to my yahoo account (so I can keep track of your questions) **AND** to the email address listed below. I will **NOT** be checking my yahoo email account until I return to land!

I love being around all of these scientists and research, it reminds me of college and why I have always loved science so much.

I hope everyone is having a great summer and I appreciate you spending time with me on this adventure.

Oh happy day,
Elizabeth Eubanks

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Question of the Day

What does the word pelagic mean?

Question of the trip

Which hook, the J or Circle will catch more sharks?

Please make a hypothesis. Utilize resources to justify your hypothesis.

-----Yes, you get extra credit for this.