



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

**NOAA Teacher at Sea: Elizabeth Eubanks**

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 5, July 26, 2007, Wednesday

**Pacific Ocean** - Tanner Bank – East of San Clemente (Interesting fact: Tanner Bank connects to Cortez Bank, which has some of the largest waves ever ridden.)

**Weather Data from the Bridge taken at 1500 (3pm) - Deep Sea Temp at (2000) 8pm**

Visibility: 8-10 miles

Air temperature: 18.2 degrees C

Sea Temperature at 404m: 6.8 degrees C

Sea Temperature at surface: 21.3 degrees C

Wind Direction: 300 W

Wind Speed: 18 kts

Cloud cover: clear –cumulus

Sea Level Pressure: 1013.2 mb

Sea Wave Height: 2 ft

Swell Wave Height: 3-4 ft

**Science and Technology Log**

Being careful, paying attention. Do you know what an assembly line is? It is when a group of people comes together with many individual specific tasks to achieve an overall goal. If you have ever seen the Laverne and Shirley TV show, they work on an assembly line at Shotz Brewery. Here there is an assembly line system too. There is one style when we set the lines with bait and another when we haul. Everyone has a very specific job and if you don't do your job or pay attention, it can wreck the whole affair. The thing I couldn't imagine would be to do something like this or have the exact same job everyday and all day. But the way it is done on the ship is easy and pleasant and only lasts for about an hour at a time, which is the perfect time limit. If it were too much longer I would get bored and my mind would wander.

Even though the job is relatively easy, it is so important to be careful and to stay focused. For instance one of the jobs I had today required that I put the bait on the hook. No big deal really- right? – Except that the bait needed to be put on a specific hook type, which someone handed to me, in my case I was baiting the J hooks. The hook was attached to a 50-foot multi-strand steal cable, which is attached to a gangion clip. Still no biggie right? Well, when you are baiting over 100 hooks and there is someone in front of you waiting to grab the hook, because there is 2 nautical mile line that is being pulled or hauled and they have to put the baited line in a specific place it becomes a big deal. We have to move

at a steady pace because the line is being hauled out into the ocean at a certain rate. The person who is attaching the ganglions to line really needs to stay focused and be careful as well. Also for this study since we are testing hook effectiveness we need to alternate the J and Circle hook to eliminate variables. In other words we don't want to be able to say – well all the sharks were caught on the J hooks because we set all of the J hooks first and they got to a longer soak (time in the water) time. Does that make sense? We have to pay attention to the “hooker” and help make certain that they are alternating hooks.



**Setting a long line: Ann Coleman from the Monterey Bay Aquarium at the front of the set line waits to put the ganglion on the line, while someone else attaches a buoy. Beyond Ann, the crew is baiting the lines; beyond them, the crew prepares the hook and beyond them the deck crew extends the long line.**

Things that could go wrong with baiting the hook:

- not putting the bait on well enough
- getting your lines tangled with one another
- getting your line tangled on yourself or someone else or a part of the ship
- not giving the person the correct J or circle hook
- not having your hooks baited in a timely manner

Preventatives:

- say the word out loud J hook or Circle – helps everyone stay focused
- to avoid tangles, don't bait too many hooks ahead time
- have one or two hooks baited ahead of time, incase you get a little behind for some reason
- keep an eye on your 50 ft line and straighten it out

Is there any job that you are particularly interested in? If so please let me know.



**Dr. Russ Vetter holding a Cowcod Rockfish which he took DNA samples from. This fish could be at least 40 years old.**

### **Personal Log**

Today I had the early shift, which meant that I woke up at 0530 and started working at 0600. Last night the ship was rockier than it has been and hasn't let up much all day. When I went outside it was gray, chilly and slightly windy. After the set I went upstairs to read and fell asleep, it was the perfect morning for a good book and a nap. I hibernated a little more after lunch and watched a movie by myself in the crew lounge. *Music and Lyrics* with Hugh Grant and Drew Barrymore. – Cute movie!

I still feel a little rocky in my tummy on and off, but soda crackers, ginger gum and doing things help take the edge off. Sometimes I wish the boat would just stop rocking for a few minutes!

Several folks were fishing for a few hours and pulled in some beautiful Rockfish – several different varieties (species). They caught a species that is on the protected list, which is called a Cowcod Rockfish. They took DNA samples from it. Check it out above. They also caught a large Pacific Mackerel and two flat fish, which they call Sand Daps. I had fun because I got to fillet a few of the Rockfish – something I haven't done for several years and yeah I can still do it – thanks Dad!

Oh happy day,  
Elizabeth Eubanks

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

elizabeth.eubanks.atsea@jonems.jordan.oma.noaa.gov

### **Question of the Day**

While we are setting and hauling lines we like to talk and to sing songs. Using a song you already know change the words so that the song has to do with fishing for sharks. Here are some words you might want to use; shark, ray, seal, sea lion, ship, deck, line, haul, set or some others you may think of.

Please include the name of the song you are writing the new lyrics to. If you don't know any songs, write a poem.

### **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.*