



**NOAA Teacher at Sea**  
**Susan Smith**  
**Onboard NOAA Ship *Rainier***  
**June 1 – 12, 2009**

**NOAA Teacher at Sea: Susan Smith**

NOAA Ship *Rainier*

Mission: Hydrographic Survey

Geographical area of Cruise: Trocadero Bay,  
Alaska; 55°20.990' N, 133°00.677' W

Date: Wednesday, June 3, 2009

**Weather Data from the Bridge**

Sea Temperature: 10.0 C (50 F)

Visibility: Clear, 10+ nautical miles

**Science and Technology Log**

What a way to start the day- learning how to deploy launches and all that goes into that process. Each new person onboard the ship who was going to be taking a launch, or responsible for their deployment, was required to attend this training meeting. Safety is of utmost importance on the NOAA ships and the smallest things when not done properly can result in disaster.

I learned a great deal of new vocabulary this morning, mostly pertaining to launch equipment, rope terms, and parts of the launch. It was stressed that in order for us all to have a positive experience we had to learn these terms and their procedures as quickly as possible.

**Vocabulary:** davit, lizard line, frapping line, bitter end, bite of line

Three launches were deployed this afternoon to various areas around the Trocadero Bay. Using a Conductivity, Temperature and Depth (CTD) cast three times, we were able to determine salinity, depth of water, and temperature, all measurements used to calculate speed of sound.

We set off to finish collecting data from areas missed, called "getting the holiday". These are



**NOAA Ship *Rainier***



**Coiling the throwing line**



**Tying off the Lizard Line**

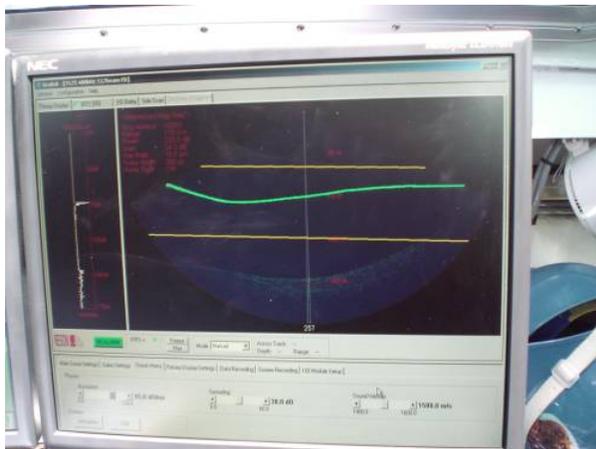
generally very small white areas on the screen which need to be surveyed. The wide pink line on the screen to the right indicates the section being surveyed. The pink section is actually made of many tiny lines as the sonar pings back to the launch.



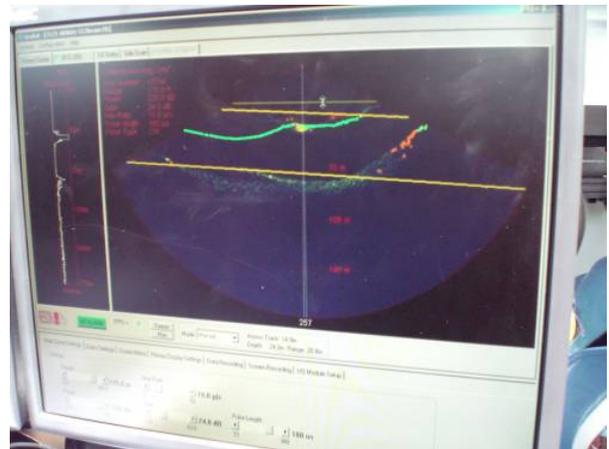
Here I am working the sonar on a launch. Computer screens showing a vast array of data being collected and the charts used to record the data.



Brown Kelp often deceives the sonar as it may appear as rocks.



Beautiful screen showing sonar return, most likely a rocky bottom. There are no breaks in the line, or acoustic shadows. The surveyors and techs really like this display of information.



This display is not so beautiful. The bottom was most likely mud or other soft bottom type, preventing a strong sonar return. The line with orange and yellow dots under the bright green line is very weak and blurry. There are blank sections called acoustic shadows, or locations the sonar does not reach.

**Animals Sighted:** Red jellyfish, blue jellyfish, deer on the coastline

### **Personal Log**

What a grand time to be on a NOAA ship in Alaska! The weather has been fantastic, the scenery quite beautiful, and wonderful people who enjoy their jobs.

Upon my arrival I was assigned “The PIT”, A C desk sleeping berth areas. It is below the laundry room, but very dark and surprisingly quiet considering its proximity to other mechanical areas of the ship. The suggested ear plugs were certainly a welcome item in the event I just couldn’t get to sleep.

Once I got my bearings, most of the areas I had to be in were easy to find. I was a little apprehensive that the onboard drills would be stressful, especially if I happened to be on the bridge or in the plot room. Going down three sets of steps, getting my survival suit, climbing back up one set of steps, and making it to my muster station as quickly as possible was not my idea of fun. However it was not as I imagined, as there were plenty of other new people who had to maneuver themselves around as well. Plus, we did not have to don the suits...this time!



**A fire station on the *Rainier***



**Trocadero Bay**

As for the food...it is wonderful, as our cooks know what really drives the ship—a hunger-satisfied crew. And we get service with a smile, something not found in most public restaurants in this day and time.

After my dinner Tuesday night I was able to go kayaking in the Trocadero Bay, located inside the Tongass National Forest. Never having done this activity before, I was quite excited to get going. Four of us took to the water for about two hours,

kayaking around a large island. While sitting as still as the current would allow I was able to see quite a few seals pop their heads up, look around, then dive under again. Maybe we were infringing upon their recreation area!

The view was spectacular, the water was calm, and I finally got to view a few eagles close enough to actually see the white feathers on their necks. Bird calls were also abundant. Such a nice way to end the day at sea.