



**NOAA Teacher at Sea
Matt Lawson
Onboard NOAA Ship RAINIER
June 9 – 20, 2008**

NOAA Teacher at Sea: Matt Lawson

NOAA Ship RAINIER

Mission: Hydrographic charting of Bay of Esquibel, Alaska

Date: Tuesday, June 10, 2008

Weather Data from the Bridge as of Wednesday

Visibility: 10 nautical miles (Nm.)

Wind Direction: none

Wind Speed: none

Sea Wave Height: none

Seawater Temperature: 7.8 Celcius (C)

Sea Level Pressure: 1018.1 millibars (Mb.)

Cloud Cover & skies: overcast

Air Temperature:

Dry bulb – 12.2 C

Wet bulb – 8.3 C

Science and Technology Log

Out to Launch!

June 10:

At 7:50 am CO Haines met with everyone involved in today's launches to talk about the work, weather and safety. Acting FOO Smith covered the particulars of the survey work each launch boat would be conducting. Chief Boatswain Kruger briefly reminded us about safety and being in your positions at the right times, then the order in which the launches would depart from the ship.

Very shortly after 8am, we climbed aboard RA-#4 (RAINIER launch boat #4) and were lowered into the water. All six launch boats are similar to each other in that they are about 30 feet long, have built-in diesel



One of the gravity davits stands waiting for the return of its launch boat.

engines, a cabin, and a canopy over the coxswain's wheel. They are housed upon gravity davits, which are not the latest in technology, but very durable and reliable. More modern davits use



RA-4 leaves a trail as it speeds to the assigned survey site.

hydraulic systems and they require fewer deckhands to operate. It appears to me that each system has its advantages. Today, we mainly used the side scan sonar system on that boat to survey some of the rocky off shore areas of Biali Rock. The weather was pretty good except that the waves were 6-7 feet tall, making it a little rough for the new guy. Amy Riley, Lead Survey Technician, invited me below deck to see the work she and Grant

were doing. Basically, they had a computer with three monitors, showing the current GPS map of where we were, the scanning in real time and a 3-D image of the ocean floor as it was being processed. The job here for the technicians is to monitor the computers as they accumulate data that will later be processed. But this is not yet the end product. The processed data is finally sent ashore where NOAA cartographers will create the actual charts used for navigation. Even though quite a number of other things were going on in other smaller windows, I'm not above admitting I didn't fully understand it all! I was allowed to take the tech's chair for a while and we did 4-5 passes with me in control of the system. Somehow, I managed not to crash us into anything!

Later, I sat in on the survey de-briefing in the wardroom. This meeting takes place every day immediately after the last launch returns to the ship. Everyone involved in the launches participates in this meeting. While everyone is given an opportunity to speak about the day, the lead survey technician for each launch specifically makes an official report on accomplishments, areas of interest or concern, problems and/or issues that need to be addressed before the next set of launches departs. I found this part of the day just as interesting because it created a summary for the entire day's mission.

Personal Log

Drill or No Drill?

While out on the launch, we were able to catch a little of the radio chatter. It's always good to listen to the radio, even when it doesn't pertain to you. It keeps you in the know and alert to possible hazards in your path. I'm adding "listening to the radio" as a rule on my "to do" list, and I'm about to give you a good example as to why. As we listened, it sounded like a "Man Overboard" drill was taking place on the ship. Ha, ha. Better them than us. However, the more we listened, we began to realize we were really missing the event of the day. Apparently, two

fishermen were out on a fairly old boat when they began to sink. We don't know the cause, just that it was going down fast. They were able to get out only one mayday call. However, RAINIER's bridge was able to pick up on and respond to the call. Despite the fact that much of the ship's personnel were out on launches, a sufficient rescue team was mustered



The two fishermen in their “Gumby Suits” wait to be rescued. Their capsized fishing boat is in the foreground. Photo courtesy of Ian Colvert

and conducted a flawless rescue mission. The two fishermen were in their emergency immersion or “Gumby suits” and had not suffered too much when they were picked up. After allowing them time to rest and somewhat recover from shock, they were taken to the nearest port.



NOAA personnel expertly pluck the stranded fishermen from the sea. Even as they suffered from shock, they thanked the rescue team profusely for being there. Photo courtesy of Ian Colvert

I had read how NOAA vessels frequently play vital roles in various rescue missions, but being here when it happens makes a much bigger impression. Today proved just how easily things can get hairy out here and how important it is to know how to handle emergency situations. Drills

and safety meetings occur regularly on RAINIER, and once again, came in very helpful.

Ian Colvert, a NOAA Survey Technician was on board RAINIER when the rescue mission took place. He is credited for the rescue pictures.

Not Yet a Salty Dog

I have to diverge a little here. Operating a computer on a wildly thrashing boat was indeed a new experience in and of itself, as well as a point of hilarity for the Lead Technician, Amy, who's been doing this for a long time. Just working the mouse was like riding Ferdinand the Bull after being stung by an unfriendly bee. Anyway, after an hour of this, I began to get seasick. Yes, the new experiences just keep coming! At the risk of using too many analogies in one paragraph, I will say sea sickness pretty much just feels as if you've been traveling in the back of a tired old Chevy Impala being driven through very hilly country roads by a driver who should've had his/her license taken away 35 years ago. Basically, puke city. I had to return to the deck where I could see the horizon and let my brain make sense of things again. Recovery was a slow process in 6-7 foot waves, but I did eventually manage and was normal again long before we returned to the relative steadiness of the ship.

Sailing/Nautical terms for all you land lovers:

1. **FOO** – Field Operations Officer
2. **SONAR** – SOund Navigation Ranging – technology which uses sound to determine water depth.
3. **Side scan SONAR** – a category of SONAR that is used to create an image of a large area of the sea floor. This type of SONAR is often used when conducting surveys of the seafloor in order to create nautical charts for navigation.
4. **Gravity Davit** – davit system which relies on the weight of the boat to lower it into the water.
5. **GPS** – Global Positioning System – a mechanism which uses satellite systems to determine location.
6. **Coxswain** the helmsman or crew member in command of a boat.
7. **Manual Floatation Device** – any life jacket that must be activated by the wearer (usually a rip cord and air canister system) to make it buoyant.
8. **Positive Floatation Device** – a life jacket that does not require manual activation and is designed to keep the wearer's head above water.
9. **Immersion Suit** – a full body suit which functions as a positive floatation device. Used in emergency situations, such as abandoning ship. The insulation and water proofing of these suits are important factors in colder waters.
10. **Muster** – to gather.
11. **Bridge** – sometimes called a pilot house, the place from which the ship is steered. This is the heart of ship operations.

Animals Seen Today

No new ones, but it was still exciting to see so many. Even though the somewhat higher waves kept me busy with the challenge of standing up, I did notice a large colony of starfish hanging on some rocks in calm waters.



Bald eagles are as abundant here as the crows are at home.



Sea otters bathed and ate nonchalantly on their backs as we passed between the islands.

“Did You Know?”

- There are cold water corals which grow in the Alaskan waters.
- The Gulf of Esquibel (pronounced “es-ki-bell”) was originally named by Fransisco Antonio Maurelle about May 22,1779 in honor of Mariano Nunez de Esquivel, the surgeon of the ship *La Favorita*.
- Alaska itself was purchased by the United States from Russia in 1867.
- Prior to its sale to the U.S., the Russians referred to it as “Russian America.”