



**NOAA Teacher at Sea
Jeff Lawrence
Onboard NOAA Ship RAINIER
May 22 – June 2, 2006**

Mission: Hydrography

Day 1: Monday, May 22, 2006

Weather Data from Bridge

Not available today

Science and Technology Log

Today the NOAA ship RAINIER was set to leave port with a brief refueling stop before anchoring later in the afternoon. The RAINIER was tied to port alongside her sister ship, the FAIRWEATHER, during a brief liberty at Petersburg, Alaska. I began my day at 0700 with breakfast in the mess hall followed by a visit to the briefing room at 0800 hours on the next two-week duty schedule of the RAINIER. I was joined by another civilian from the local NPR radio station who was onboard to do an interview on the mission of the RAINIER in the Wrangell Narrows, which runs parallel to Petersburg. The radio interviewer, Emily Schwing, asked many questions about how the sonar system works and how often the RAINIER would be back to check if the currents in the Wrangell Narrows had changed the channel. She learned that the system of sonar mapping used today is much more efficient than the beamed sonar used in past years. Side-scan and multi-beam sonar are now employed to map the bottom of the shipping channels, narrows, and ports. The RAINIER mapped an area recently in a few weeks that took 19 years to map under the old system.

At 0945 the RAINIER left port for a short jaunt of about 400 yards for refueling. The fueling process on a large ship such as the RAINIER is not a quick-stop process, which many people are accustomed to while fueling their vehicles. The RAINIER took on 22,000 gallons of fuel. This process lasted over three hours due to the slow pumping, which pumped out about 150 gallons per minute. That seemed quite fast to me, but Captain Guy Noll explained that fuel could be pumped much faster for the larger ships. While refueling I received an overview from ENS Jennings of damage control onboard a ship and where to go in case of an emergency.

- 1) Fire emergency – Indicated by one long 10-second continuous blast of the ships horn.
- 2) Abandon Ship – Indicated with seven short blasts and one long blast.
- 3) Man Over Board – Indicated by three long blasts.

At 1330 Seaman Surveyor Eric Davis took the skiff (a small zodiac type boat) out into the narrows to check if repairs that had been made in port were adequate. He asked me to join him and while in the narrows he pointed out the channel's navigation buoys and explained how they are used to guide both small and large craft through the narrows, which become very shallow and dangerous during low tide. Upon returning to the

RAINIER refueling was just about complete so all hands manned their stations to ready for departure from the fueling depot. At 1530 we left port to travel down the narrows a few miles where we anchored for the night. We will remain in anchor here for several days while the launch boats are sent out on daily runs to map more of the Wrangell Narrows.

Personal Log

Throughout the day I found incredible opportunities for taking photos of wildlife including bald eagles, sea lions, and a variety of other birds. Alaska has to be an ornithological paradise. The surrounding landscape offered an exquisite 360-degree panoramic view that allowed for spectacular photographs of the area.

Question of the Day

What is the mean tide for Petersburg on this day using the data below?

Low tide was 4 feet at 2:33 am

High tide was 13.5 feet at 8:10 am

Low tide was 1.3 feet at 2:51 pm

High tide was 14.5 feet at 9:14 pm

Jeff Lawrence