



**NOAA Teacher at Sea
Mike Laird
Onboard NOAA Ship RAINIER
July 24 - August 13, 2005**

Log 10

Day 11: Thursday, August 4

Time: 13:00

Latitude: 55° 50.8' N

Longitude: 158° 50.0' W

Visibility: 10 nautical miles (nm)

Wind Direction: Light Airs

Wind Speed: Light Airs

Sea Wave Height: 0'

Swell Wave Height: 0'

Sea Water Temperature: 11.7° C

Sea Level Pressure: 1011.0 mb

Cloud Cover: Sky 0/8 covered

Science and Technology Log

The day begins early with launches leaving at 7:00. The reason for the early start is that two launches (RA1 and RA2) are doing shoreline work. Shoreline work must be done at lower low tide (in an area in which there are diurnal tides – two flooding periods and two ebbing periods – the lower low tide is the lower of the two ebbing periods), and on this day, the tidal window for this tide period is from 7:10 to 12:30. The work along the ocean/land transition is done when the water level is at its lowest point so there is increased confidence that all features are observed and accounted for.

I have been assigned to launch RA2 and will have an opportunity for the first time to observe exactly how the shoreline surveys are conducted. The work entails confirming existing map data from three sources: 1) the cartographic features file which is composed of data collected from aerial surveys (the photographs are used to create a map on which the shoreline and off shore features are shown); 2) LIDAR - a relatively new technology in which an aerial survey is conducted using lasers; and 3) existing nautical charts.

Confirming the data entails running the shoreline and comparing the actual shoreline and buffer (the water in a zone of between thirty and fifty meters just offshore) to what appears on the map. A feature confirmation requires a visual observation of the feature. As features are observed, a notation is hand written on a hard copy of the map. Later, the notations will be input into the ship's computer.

In addition to noting known features, features not currently shown are recorded on the map along with their location and depth. In some cases, features shown on the map cannot be located. In these situations, a notation is made and a reason (too much kelp, water too deep, etc) is given. This signals the sheet manager that further investigation is required. If the water in the area is safe (the original boat conducting the survey is equipped with a single beam sonar system and will determine the water depth and then scan the area running in a star pattern searching for obstructions), one of the launches equipped with a multibeam echo sounding system will be sent in to do a 100% floor scan to confirm the feature. If the area is not safe, a dive team will be sent in to do the confirmation. Shoreline work is a bit more dynamic than the deepwater work – the crew must constantly be aware of what is happening with the surf as rocks can suddenly appear!

Personal Log

The food onboard the RAINIER is quite tasty with a wide range of options available at every meal. Starting off the day with breakfast (served 0700-0730), the most important meal of the day, choices include: eggs to order, fried, scrambled, poached, or boiled; omelets: cheese, minced ham, or vegetarian; french toast; hot cakes; waffles; fresh fruit: cantaloupe, pineapple, honeydew melon, mango; some type of meat: ham, bacon, sausage, Spam; cold cereal, coffee, tea, juice, milk.

Selections for today's lunch (served from 1200-1230) were: **Entrées:** homemade gumbo soup, grilled fillet of catfish/tartar sauce, hot roast beef sandwich, mushroom and cheese quesadillas. **Side Dishes:** diced brown potatoes, steamed rice, steamed fresh cauliflower. **Dessert:** chilled jello/whip cream. **Drinks:** water, juice, milk, lemonade or grape flavored drink, coffee.

Today's dinner (served from 1700-1730) is a fantail (kind of like the ship's back porch) cookout. **Salads:** pasta, potato, and another salad I'm not sure what it was; **Entrees:** BBQ - steaks, ribs and sausage, fried chicken; **Side dishes:** egg rolls, french fries, and pot stickers; **Drinks:** water and assorted juices. A real feast!