



**NOAA Teacher at Sea
Rita Larson
Onboard NOAA Ship *Rainier*
August 10 – 27, 2009**

NOAA Teacher at Sea: Rita Larson

NOAA Ship *Rainier*

Mission: Hydrographic Survey

Geographical Area of the Cruise: Kasitsna Bay, AK

Date: August 12, 2009

Weather Data from the Bridge

Latitude: 59° 28.515'N

Longitude: 151° 33.54'W

Sea Water Temperature: 9.4°C

Air Temperature: Dry Bulb: 14.4°C (58°F); Wet Bulb: 12.2°C (55°F)

Visibility: 10 miles

Wind: 06

Science and Technology Log

Last night (Aug 11, 2009) the P.O.D (Plan of the Day) was posted and I found out that I was assigned to work with the Survey Team. We would go out on the skiff identified as RA-8.

(August 12, 2009) We had a special guest that came with us today, Mr. Randall, from the NOAA Headquarters located in Silver Spring, Maryland was in Homer Alaska, so we drove RA-8 to Homer, Alaska to pick him up. Then we proceeded to Bear Cove to complete our main mission, which was to observe the tides and complete the leveling of the remote tide gauge. NOAA uses tide gauges to verify long-term assessment of sea level changes and establishes the vertical datum, or frame of reference, for their nautical charts. Mr. Randall was retrieving a GPS (Global Positioning System) unit that was planted in Bear Cove the previous day to collect data.

Our crew consisted of Matt Abraham, our coxswain, was responsible for driving the open skiff (RA-8). Our hydrographer in charge was ENS Schultz; she surveyed Bear



The skiff RA-8 being launched from NOAA Ship *Rainier*.

Cove and retrieved the data from the tide gauge. Manuel Cruz and Tony Lukach were responsible for holding the leveling rods to help complete the survey. My responsibility was to write the data given to me and record it on the leveling sheets and find the difference between each measurement. Mr. Randall also worked with us throughout the day. While surveying we used a three-wired level that sits on a tripod, level rods, measuring tape, turtles, pencil, and a calculator.



Left: I'm looking through a three-wire level.

Above: at Bear Cove with the NOAA team

Below: ENS calculating survey data.

Personal Log

I was so excited about this mission since it was my first one. I was very cold in the morning since we were a little bit wet from the spray of the ocean, even though I was dressed very warmly. By the afternoon I was only wearing a t-shirt and jeans. The scientists were telling me the last time they were at Bear Cove they actually saw a bear. So, I was looking around constantly to keep an eye out for them.



At one point of the day I went with ENS Schultz to collect the initial tide measurements from the tide gauge and check the flow of the nitrogen gas to make sure it was operating smoothly. Little did I know that I had to climb a wooded hill to help collect this data. One has to be in great physical shape to perform these types of tasks. It was unbelievable to see such sophisticated equipment in such a remote area.

After observing these remarkable scientists doing their jobs in the middle of a mosquito-infested area, I applaud everything they do. I felt comfortable and I felt safe in their care. They are all so knowledgeable in their fields. One can really sense the teamwork that is needed for all the missions NOAA expects from them. I am proud and honored to be a part of the project called Hydropalooza, which provides a deeper understanding of Alaska's Kachemak Bay.



Collecting data from the tide gauge from Bear Cove

New Term/Phrase/Word

Turtles in surveying are not animals. They are used as half way marks from the benchmark item to the surveyor. The ones we used were round and heavy with a silver handle on them. They are heavy for a reason, so they do not move once they are placed on the ground. Surveying is very important to this mission since the measurements must be within 2.5mm.

Animals Seen Today

Puffins and Sea Otters

As we were bringing Mr. Randall back to Homer we saw this glacier in the distance.

