



NOAA Teacher at Sea
Linda Armwood
Onboard NOAA Ship FAIRWEATHER
April 25 – May 5, 2005

Mission: Hydrography
Day 1: Tuesday, April 25, 2006

Weather Data from Bridge

Visibility: 10 nautical miles (nm)
Wind direction: 340°
Wind speed: 2 kt
Sea level pressure: 1018.8 mb
Present weather: Partly cloudy
Temperature: °C~ 6.0 dry/5.0 wet

Science and Technology Log

I woke up in time for breakfast at 0700. I was joined at breakfast by the Commanding Officer, the Executive Officer, and the Chief Electronics Technician. The conversation centered around the different careers that exist on the ship. In addition to the careers, discussion was had regarding the ship being analogous to a city. The XO gave me a tour of the engine room. Amidst all of the engines and associated technology it was clear that the engine room could represent a city public utilities department and waste management facility. The sea water is the readily available water source that is filtered through a distillation process to be used on the ship for all purposes. The idea that the engineers are responsible for treating the water that is used on the ship is a credit to their knowledge and stamina.

I attended the briefing meeting conducted by the Field Operations Officer and the Chief Survey Technician. Several handouts were given and explained in reference to guidelines for this field season: presurvey, data acquisition, processing and deliverables. These guidelines were synonymous in its most simplistic form with what I have presented to my students in preparation for laboratory experiences. Acronyms were used throughout the meeting, but I was able to follow along with the language thanks to a survey technician's thoughtfulness in providing me with three pages of acronyms and their meanings. As a part of the meeting, the Senior Survey Technician presented CUBE software. This software completes data analysis to offer the user possible hypotheses. The Chief Survey Tech informed the techs against simply relying on the hypotheses offered by CUBE.

After lunch, I spent a considerable amount of time on the bridge checking out the weather monitoring instruments and the navigation technology. The weather log is manually completed every four hours while the ship is docked and every hour while at sea. The weather monitoring instruments and navigation technology range from simplistically designed wet/dry bulb thermometers for temperature readings to more complex in form

and function technology such as the ECDIS (Electronic Chart Display Information System.) The ECDIS has the capability to overlay radar on in use charts and display information about specific ships within the VHF radio range. For example, information about a 1500 ton ship that is within 40 miles of the FAIRWEATHER can be displayed on the ECDIS.

Personal Log

During the early evening I went to Settlers' Cove to visit the rain forest. A bald eagle and two river otters were spotted feeding in the water. Lush foliage and trees created a moderately warm and moist environment in the midst of the surrounding cold temperature.

Question of the Day

Geospatial Semester Students

What is the functional difference that exists between global positioning system (gps) and differential global positioning system (dgps)?

Environmental Science Students

Compare the FAIRWEATHER survey technicians' field survey guidelines to the Richmond Public Schools model for experimental design.

Bonus Question

Provide a possible explanation for the Settlers' Cove rain forest environment within the relatively cold environment of Ketchikan.

Mrs. Armwood