



**NOAA Teacher at Sea
Mark Friedman
Onboard NOAA Ship RAINIER
June 9 – 20, 2008**

NOAA Teacher at Sea: Mark Friedman, Marine Biology teacher from Animo Leadership High School, Los Angeles, CA

NOAA Ship RAINIER

Mission: Hydrographic survey and ocean bottom features mapping (*see vocabulary help at end*)

Geographic area: Gulf of Alaska, Heading west from southeastern Alaska the Alexander Archipelago (Sitka area) to Kodiak Island, the Northeastern part of the Aleutian Islands

Date: June 19, 2008

Weather Data from the Bridge

Southern winds 10-15, Patchy fog, High of 55 ° F. Seas a slight chop with waves of 3-5 feet.

Science and Technology Log

The POD reports (Remember from the last log what a POD is?)

We began this nearly two-day journey Wednesday, June 18 after a short day of surveying. The day before, June 17, I participated in a coastline survey team to check on smaller marine anomalies that could be rocks or dense macrocystis algae (A.K.A. giant kelp in southern California) that often appear as a solid formation from aerial



Above: TAS Friedman holds up a macrocystis algae. Left: The macrocystis laid out on a bench is one meter long

observations and laser surveys done by the Coast Guard.

The same macrocystis algae that has fronds (leaves) up to about 18 inches long in California, grows to over three feet up here. Each frond is as large as a tobacco leaf (see

photo). My marine biology students back in LA will enjoy the comparison as I am drying some to bring it back.

We shall arrive in Kodiak June 20 at 0900, and the crew and guests will disembark to get some land time. Some of us off hiking, others R and R camping, golfing, biking, etc. We'll return to the ship to sleep and I depart back for LA June 22.

My Project and Lesson Plan

My task on board the RAINIER has been successfully completed. It has been to learn as much as I can about hydrography and the charting of nautical maps. I shall be able to share this information with others thru the creation of a lesson plan soon to be available on the Teacher At Sea website.

The primary purpose of this lesson plan **“Marine Careers on Board NOAA Research Vessels”** is to make more available a descriptive motivation of potential jobs and careers that NOAA offers. To accomplish this I developed a questionnaire which 25 crew completed, from the ship's commander to the entry-level wiper or ordinary seaman. Each interviewee was photographed on the job and both documents will soon be posted on multiple websites and made available to teachers and counselors internationally. There are hundreds of jobs available on NOAA ships and land support positions that are rarely publicized.

Through this effort I hope to be part of publicizing NOAA job openings available to any youth over 18.

An Unforgettable Journey

I have been fortunate to be on board this premier NOAA research vessel, RAINIER, for two weeks as an observer and student. It has been an exhilarating experience I shall share with other science teachers individually and at national, state and regional science conferences. The Teacher At Sea program is an exceptional opportunity for teachers to learn and be part of real time scientific research that has concrete and immediate application to understanding the marine environment and the preservation of its character in the face of the human destructive onslaught.



NOAA Ship RAINIER

I leave a more committed environmental steward, materialist and marine scientist.

Please feel free to contact me for any information about the program or materials associated with this experience. Mark Friedman. Mfriedman@animo.org.