



NOAA Teacher at Sea
Jim Jenkins
Onboard NOAA Ship MILLER FREEMAN
April 18 - 30, 2005

Day 1: Monday, April 18, 2005
Latitude: 57, 37, 50 North
Longitude: 156, 02, 34 West
Visibility: 8 Nautical Miles
Wind Direction: 161 Degrees
Wind Speed: 17 Knots
Sea Wave Height: 4-5 Feet
Swell Wave Height: 4-6 Feet
Sea Water Temperature: 4 Degrees C
Sea Level Pressure: 1001.5
Cloud Cover: Partly Cloudy

Science and Technology Log:

I arrived in Kodiak on the afternoon of April 15.
The first few days in Kodiak were spent helping

scientists and deck hands load equipment and assemble moorings. The sensors are used to gather information about currents, salinity (saltiness), water temperature, weather, and ocean organism populations. Some of the moorings are so large that a crane needed to move them about the deck for assembly.

One of these moorings will ride on the surface of the ocean on a doughnut shaped center about the size of a monster truck tire. A 12-foot high triangular tower made of metal is attached to the top of doughnut like piece with bolts. This part of the mooring collects weather data. A second triangular metal tower is bolted to the bottom of the center piece. This section is made of different types of metal which enables collection of data on salinity. Three 110-pound metal triangles attached in the center of this section hold the mooring down in the water. The whole apparatus is anchored to the bottom of the ocean using old railway wheels. What do you think of this form of recycling? I am sending photos of the mooring as well as the wheels used to anchor the mooring. Please take a careful look at the photos. I know that you will have excellent questions as usual. Be certain that I will post replies to your questions quickly.

Most of this cruise will be involved with the study of conditions above a relatively shallow shelf in the Bering Sea. Water depths in this section of the sea are less than 100 meters. Your knowledge of the food chain will enable you to see that study of this productive zone is not an accident. The relative shallowness of the water enables the the sun's rays to penetrate to provide food for plant plankton or, phytoplankton, which



Mr. Jenkins with NOAA Ship MILLER FREEMAN in the background.

make their food by photosynthesis. Animal plankton, or zooplankton, eat the phytoplankton starting the food chain which provides nutrition for all ocean organisms as well as you and me!

Walleye Pollock are the most harvested fish in the Bering Sea. Each year, about 1,000,000 metric tons of this fish are caught and sent to food processing factories. Can you tell me how many pounds make up a metric ton? This may require a little research as well as your math skills, but I am sure that you can do this. I look forward to your answer.

You may have eaten Walleye Pollock and not known it! Much of the fish caught is processed into fish filets or fish sticks. You probably have eaten Walleye Pollock if you have had a fish sandwich at a restaurant. Some of the walleye harvest is made into a paste. This paste is added to crab products in the artificial crab that you may have enjoyed. Does this make you want to look at food packages and do other research regarding the source of your food? Anyway, I hope you have enjoyed your taste of the bounty of the Bering Sea!

I needed to go up to the bridge yesterday to get the data which begins this journal. A Killer Whale came to the surface right in front of the ship while I was recording the data. Awesome!

Personal Log:

Kodiak was one of the most beautiful places I have ever visited. I particularly enjoyed hikes along the beaches, through the spruce forests and on the hillsides. A box of rocks was put into the mail to all of you on Saturday. The rocks came from a gorgeous cobble beach called Mayflower Beach. I think you will enjoy the way the sea smoothed your rock to leave the wonderfully sculpted pieces which you will soon have. I hope you enjoy these treasures of nature!

A sculpin was one of the fish caught on a fishing trip yesterday. I remember how interested all of you were in the report on sculpin done by Alison. A photo was taken before releasing the fish. I am sending a copy of the photo.



I have proven that it is possible for a human being to become seasick on a 215 boat in 4-foot seas (Very Big Grin)! Anyway, I am peachy now and look forward to your replies. I miss you guys!

Above is the mooring. Ms. Thornton's instrument to determine nitrate level will be placed beneath this.