



**NOAA Teacher at Sea**  
**Jennifer Fry**  
**Onboard NOAA Ship *Miller Freeman***  
**July 14 – 29, 2009**

**NOAA Teacher at Sea: Jennifer Fry**

NOAA Ship *Miller Freeman* (link: <http://www.moc.noaa.gov/mf/>)

Current location of ship: [www.shiptracker.noaa.gov](http://www.shiptracker.noaa.gov) (choose *Miller Freeman*)

Mission: 2009 United States/Canada Pacific Hake Acoustic Survey

Geographical area of cruise: North Pacific Ocean from Monterey, CA to British Columbia, CA.

Date: July 19, 2009

**Weather Data from the Bridge**

Wind speed: 42 knots

Wind direction: 350° from the north

Visibility: clear

Temperature: 11.4°C (dry bulb); 10.4°C (wet bulb)

**Science and Technology Log**

The seas are still very rough with 40 knot winds. No fishing trawls due to the high waves and heavy seas. However, despite the rough seas, we were able to conduct an **XBT**, which stands for Expendable Bathythermograph. An XBT is a measuring apparatus consisting of a large lead weight connected to a very thin copper wire.

The function of the **XBT** is to measure the temperature throughout the water column. It is launched off the stern (back) of the ship. As it sinks to the sea floor, temperature data is transmitted to an onboard computer.



**The XBT (Expendable Bathythermograph)**



**Biologist Chris Grandin prepares to launch an XBT**

## Personal Log

The *Miller Freeman* is an NOAA research vessel.

Here's a bit of information about the *Miller Freeman*...For more information go to:

<http://www.moc.noaa.gov/mf/>

The *Miller Freeman* is a 215-foot fisheries and oceanographic research vessel and is one of the largest research trawlers in the United States. Its primary mission is to provide a working platform for the study of the ocean's living resources.

The ship is named for **Miller Freeman** (1875-1955), a publisher who was actively involved in the international management of fish harvests.

The ship was launched in 1967, but not fully rigged until 1975.

The vessel was again re-rigged in

1982. Its home port is Seattle, Washington. It is capable of operating in any waters of the world. The ship has 7 NOAA Corps officers, 27 crew members, and maximum of 11 scientists.



NOAA Ship *Miller Freeman*

Following is a “tour” of the ship. It has many nice amenities for extended life at sea.

### *The Laundry Room*

Here's where we do our laundry. The washing machines are front loading which save water and



energy. The laundry room is located in the bow/front of the ship which bounces up and down a lot, so you can feel pretty sea sick if you're up there too long.

### ***The Kitchen***

Our 3 amazing cooks, Bill, Larry, and Adam, work hard preparing 3 meals a day for over 30 people. They have quite a difficult and detailed job.



### ***The Galley***

This is where we enjoy deliciously prepared meals.



***The Library***

Pictured here is the ship's library where crew members can read and check e-mail.



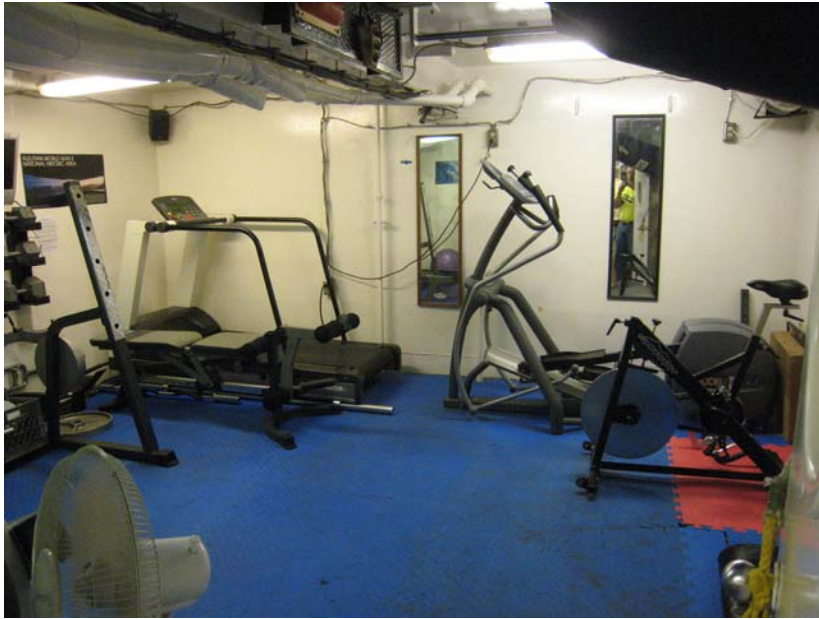
***The Lounge***

Here's the lounge where movies and video games can be watched.



### ***The Gym***

The gym is located on the lowest level of the ship. This is where you can work off the great food that you've eaten.



As I mentioned above, due to rough seas and gale force winds, there was no fishing today. We are patiently waiting for better weather.

### **The Gift of Patience**

Wending our way through the North Pacific Ocean,  
The massive waves crash against our hull with Herculean strength  
As high as a one story building, their tops are dolloped with luscious whipped cream  
They take their turn crashing against the ships sturdy hull, as gale force winds whip wildly past.  
We play a waiting game.  
We practice the ancient art of patience.  
When will we have hake, the silvery, slender fish that evades our sonar?

As the winds blow, cold sea spray stings my face.  
I watch as the never ending line of waves wait their turn to hit the ship's hull.  
The waves wait patiently as do we.  
The sea teaches us serenity.  
We must not show greed or impatience.  
The sea will provide.  
One should lay empty and open waiting for the gifts from the sea.

Inspired by Anne Morrow Lindberg's Gifts from the Sea