# NOAA Teacher at Sea
# Marilyn Frydrych
# Onboard NOAA Ship *Delaware II*
# September 15 – 25, 2008

**NOAA Teacher at Sea: Marilyn Frydrych**
NOAA Ship *Delaware II*
Mission: Atlantic Herring Hydroacoustic Survey
Geographical area of cruise: New England Coastal Waters
Date: Sunday, September 21, 2008

**Weather Data from the Bridge**
42.00 degrees, 68.06 degrees W
Partly cloudy. Wind out of the SE at 6 knots
Dry Bulb Temperature: 18.0 degrees Celsius
Wet Bulb Temperature: 15.7 degrees Celsius
Waves: 1 foot
Visibility: 10 miles
Sea Surface Temperature: 17.7 degrees Celsius

**Science and Technology Log**
We returned to a spot that Mike had marked on our computers as a place where he would have liked to have sampled the fish when the seas were high and we were unable to fish. We sent down a CTD at dawn and then deployed our net. I'm learning more about the importance of the man at the helm. If he speeds the boat then the net will rise. Conversely, if he slows the net falls. The desire of the scientist is to get a representative sample of the fish in the area, but not to take more than what is needed since we return very few alive to the ocean. The NOAA Corps officer at the helm knows this as well and has his own sonar so that he knows at what level the fish are located. He adjusts the speed of the boat as he sees fit to catch an appropriate number of fish while checking with the chief scientist or watch chief to ensure the net is where they want it.

**Red Fish waiting to be sorted and later in a clothes basket.**

I also learned that red fish are often associated with American herring. Red fish are a sweet delicious fish, which were over fished during World War II. They've been on the US's banned fishing list since that time. We brought up in today's catch about 200 small fry red fish. We also collected about 20 good-sized ones running to about 12". The large ones take up to 60 years to grow to the size where they are worth harvesting to eat. We only brought up 5 herring. This time there was one 8" squid.

We deployed the Tow Body this afternoon around 3:30 p.m. It's an undersea camera. Unfortunately the wires connecting the Tow Body to the computers had gotten broken as it sat on the fantail. Possibly the wires got jostled during clean up. (We use a fire hose to clean the fantail after each trawl.) Possibly people stepping on and over the wires as they walked about on the fantail broke the wire. This wasn't learned until moments before we were to deploy the instrument. The ET specialist, Dave Miles, figured out where the wire was broken fairly quickly and reconnected it. That gave us connectivity, but still there was a problem of the Tow Body not responding to commands from the computer. The chief scientist, Mike, tackled that part of the problem. Somehow he fixed the software. We got the go ahead signal about three hours later.

**Getting ready to deploy the Tow Body (Photo courtesy Jacquie Ostram)**

**Fisherman Jim Pontz using the grappling hook to retrieve a loose line attached to the Tow Body. (Photo courtesy Jacquie Ostram)**

This was the only deployment in which the scientific crew was allowed on the fantail as part of the deployment. Like the fishermen we had to wear a life jacket and hardhat. Four of us held onto lines that kept the Tow Body from twisting as it entered the water. Unfortunately one of the lines got loose. Displaying great skill fisherman Jim Pontz used a grappling hook to retrieve it. By now we had drifted so far off course we had to circle back into position. When we finally got the instrument in the water our fish had left the area. We could tell that by the echograms. The plans were to leave the Tow Body's lights off until the camera was surrounded by fish.

Otherwise the fish swim away from the lights. Only later when we again came into a school of fish did we learn that the lights weren't responding. The endeavor was aborted. From a scientific standpoint we did learn something. The Tow Body needed more work. We also learned that we should start disconnecting the wires from the Tow Body when it's stored on the fantail.

**Personal Log**

I watched the Broncos play this afternoon. No one else was interested. Four or five of the crew watched different football games throughout the day. They seemed to have time for their favorite team, but no one seemed to spend hours and hours watching game after game. The most popular form of relaxation was watching movies. There must be over a hundred DVD's to choose from. The screen is a large flat panel screen.