



**NOAA Teacher at Sea
Amy Pearson
Onboard NOAA Ship DELAWARE II
August 13-30, 2007**

NOAA Teacher at Sea: Amy Pearson
NOAA Ship: DELAWARE II
Mission: Ecosystems Monitoring Survey
Date: Saturday, August 25, 2007
Location: North Atlantic

Weather Data from the Bridge

Time: 1000
Latitude: 4130
Longitude: 6650
Air temp: 17.8
Water temp: 16.7
Wind direction: 220
Wind speed: 16 kts.
Sea wave height: 2 ft.
Visibility: 4 nm

Science and Technology Log

Woke to another foggy day, though the air temperature is warm (18.6 at 1:30 p.m.). When a humid air mass hits the cooler Gulf of Maine water, fog results. At about 1 p.m. we got a call from the bridge saying we just crossed into Canada – could we see the line in the water? (everyone has a sense of humor here). Yesterday we decorated the surface drifter buoy that will send location, air and



Amy and Kim decorate the buoy for launch



Teachers Amy Pearson and Kim Pratt deploy a drifter buoy

water temperature data to a satellite. Our school logos and websites are written on the buoy as well as the message “leave in the water”. NOAA will post this data on the Internet for anyone to track. Today we will deploy the buoy. Our school communities can watch this for over 400 days! Deployment went well, but the cloth drogue (holey sock) came apart and seemed to disappear below the buoy. We wore inflatable life vests and were tethered to the boat when we tossed the buoy off the ship.

Shortly after this, we took a plankton sample and as the net was coming up, I spotted some pilot whales about 40 ft. off the starboard side of the ship. There were six together, then another group appeared off the stern. They seem to stay very close together. Length was approximately 12-16 feet. They seemed to enjoy riding the stern waves. They were very cute, as the photo below shows.

Science Topic

This cruise is called an Ecosystems Monitoring Cruise. They happen four times per year, during January, May, August and November. Additional data to support this data set is collected on Fish Survey Cruises that occur in March, April, September and October. As I said in an earlier log entry, its mission is to assess changing biological and physical properties which influence the sustainable productivity of the living marine resources of the mid-Atlantic Bight, southern New England, Gulf of Maine and Georges Bank portions of the northeast continental shelf ecosystem. The plankton that is collected and analyzed must be collected in the same exact manner during each cruise in order to compare it from season to season and year to year. The constant materials used are identical 61 cm diameter



Amy Pearson with harness for connecting with ship for buoy deployment.



Pilot whale observed in the Gulf of Maine, following our ship. Others were underwater when I snapped the photo!

Bongo Nets with mesh size of 335 microns. The net is towed at a constant speed of 1.5-2 knots, 5 meters from the bottom or to a maximum depth of 200 meters. The rate of release of the nets into the water is constant as is the rate of return. There is always a 45 kg weight at the end of the wire that the nets are clipped to. The angle of the wire with the water is maintained at 45 degrees. Keeping these parameters constant allows scientists to compare the net catches because the only variable is what is

caught in the net. A flowmeter in each net measures how much water passes into each net and its data is part of the equation when amount of plankton per amount of water is calculated. Jerry Prezioso has been involved with this project since the 1970's and is

very enthusiastic and dedicated. Even when I offered to take over the hosing of nets at the end of his shift, his response was, "I live for this!" NOAA is fortunate to have so many dedicated scientists and employees who work at sea. This is definitely not like any job I've experienced. The challenges of life at sea make it not something everyone can do. Betsy Broughton, the other scientist aboard is also high energy when it comes to this work. She clearly loves every minute and enjoys sharing her knowledge with others. I have learned much from both of them.