



**NOAA Teacher at Sea
Laurie Degenhart
Onboard NOAA Ship DELAWARE II
July 14 – 25, 2008**

NOAA Teacher at Sea: Laurie Degenhart

NOAA Ship DELAWARE II

Geographical Area: North Atlantic Ocean, south of Montauk Point, NY

Date: Tuesday, July 15, 2008

Weather Data from the Bridge

Winds at 200° at 7 knots

Sea temperature: 20.7° C

Air temp 24.4° C

Swells: 160 4' 12 sec.

Atmosphere: Clear

Science and Technology Log (Monday, July 14 – Thursday, July 17)

We set sail midday on Tuesday, July 15, 2008.

Monday was spent with repairs. We heard a presentation by Dr. Larry Jacobson, the head of the Clam Survey Project. He explained that there was a general shift in the populations of Surf Clams and Ocean Quahogs.



Laurie dons a survival suit during a ship safety briefing.



NOAA Teacher at Sea, Laurie Degenhart, gets ready to set sail on the DELAWARE II.

This study is collecting data for his team to use in determining the changes and possible causes of the change. NOAA and the clam fishing industry enjoy a good relationship, working hand-in-hand to protect the clam population and promote clam fishing.

We were taken to the NOAA storeroom and outfitted with our “foul weather gear.” We wear the gear on board to sort and shuck clams. We each were issued boots, yellow bib overalls, and an orange rain slicker....I look quite dashing.

Chief scientist, Sean Lucey, gave us a general description of the work that we would be doing. Sean stressed how important accuracy is in all the facets of the Clam Survey. There are several assignments. Each person is assigned a shift. My shift is

from Noon until midnight. That's 12 hours! We are not to return to our room until our shift is over, because the other women I share the room are on the opposite shift and will be sleeping.

I am on a team with Jakub Kircun, as the Watch Chief. He is very patient and kind, even when I make a mistake. There are seven people on our team: four NOAA scientists, one graduate student who is studying plankton, one volunteer, and me, the Teacher at Sea.

General Description of a Clam Dredge

The back of the Delaware II has a large metal dredge (it looks like a giant square shifter-See photo.) The cage is lowered to the sea floor at pre-determined random locations and dragged by

a special cable called a hauser for exactly 5 minutes. Then the dredge is hauled back to the boat and its contents are dumped on a platform. We all sort through the dredged material sorting out clams and other sea life, throwing the rest back out to sea. The clams are measured, weighed, and some meat specimens are taken for examination.



The clam dredge aboard the DELAWARE II

Computers record a

vast array of information for the scientists. Sean Lucey (Chief Scientist) is always making decisions where we go and provides the lab and other scientists information about the catch. The team does around 10 or so tows in a twelve hour shift.

First Assignment

I was assigned by, Jakub Kircun, Watch Chief, to record information about the tow using a computerized data collection system called SCS (Scientific Computer Systems). I go into a room on the bridge and listen to the deck department communicating with the bridge and I record when the dredge is on the bottom, towing, and back on deck. The information is tracked in SCS with button pushers. I also log information about wave height, swell direction, and swell height, which I receive from the officer on watch. I also need to record depth, time, and speed of the boat during a dredge tow. This provides accurate data for the scientists back on land to analyze. As soon as that part of my job is finished, I come down stairs to help sort and shuck the clams..

Personal Log

Holy Cow, a 12 hour shift...from noon until mid-night! I was worried, but the shift seems to fly by. There is always something that needs to be done. I was assigned by Jakub Kircun, Watch Chief, to record the sensors for the dredge itself. What a responsibility!!! Talk about pressure. Sean, Chief Scientist, has been really great. His sense of humor has helped ease my stress. I never realized how much computers are used aboard a ship to monitor experimental data. Not to mention the general running of the ship..... There are 31 computers in all.

For each tow which Sean and Jakub call a station, I do the recording for the dredge then come down stairs...put on my boots and bib overalls and head out to sort the clams with the others on my team. It's a big job...good thing I am used to working in the woods of Wyoming...



Laurie sorts clam on the fantail of the ship.

otherwise, I don't think I could keep up!!!

After we sort the clams, Tina, a graduate student from University of Connecticut, and I measure and weigh the clams using a special computerized machine called a Limnoterra Fish Measuring Board. Tina and I are becoming great clam shuckers. We need to weigh the clams both with and without the shell. Joe, the other

volunteer, also helps weigh and shuck the clams. Sometimes they are sweet smelling... but sometimes not! They look nothing like Howard Johnson's Clam Strips!

I have started a shell collection to bring back to my school. I will be working with the Science Coordinator to design science experiments that use data from our trip. The Chief Scientist, Sean Lucey, is working with me to develop lesson plans that use the data being collected.

Just learning to find my way around the ship has been a challenge. I've learned to find the galley.... great food. Walt and John, the ship's stewards, are fantastic chefs. Today we had crab cakes with lemon sauce, vegetables, and peach cobbler with whipped cream for dessert. I am telling myself that as much physical work as I am doing I can eat what I want....that's my story and I am sticking to it!

All the crew has been welcoming and accepting. Richie and Adam, NOAA crewmembers, take care of securing the dredge. It looks like a dangerous job to me! They both have a great sense of humor.