



NOAA Teacher at Sea Mike Lynch Onboard NOAA Ship DELAWARE II June 20 – July 1, 2005

Daily Log: Day Six

Date 6/25/05

Latitude: 3858.760 N

Longitude: 07407.744 W

Wave Height: 1 foot

Swell Height: 2 Foot

Weather: clear

Visibility: unlimited

Wind Speed: 4 mph



Science Log:

As we are entering our sixth day aboard the

DELAWARE II, we are still

collecting data on Atlantic Surf Clams and Ocean Quahogs. It could be that some would

question why NOAA, the Federal government, scientists and the commercial industry would be so interested in these species as to fund our research. Today's log will try to deal with some of the reasons that make this and other surveys of this type important.

The citizens of the United States and the World depend on marine resources for jobs, recreation, tourism, medicine and industrial and commercial products. As citizens, we depend on our governments to make informed policy decisions to ensure sustainable resources for future

generations while allowing for present well-being and opportunity. These goals may sometimes appear to be at odds, but on further analysis they are interrelated. At no period in history has mankind been so acutely aware of the correlation between environment and human well-being.

The result of this awareness has placed increased public pressure on NOAA to provide optimal stewardship of these resources. NOAA and the Northeast Fishery Science Center have established goals that attempt to reach a balance between conservation for the future and efficient utilization of existing resources. The first goal centers on research and monitoring. This is where the scientific surveys, such as the Clam Survey provide data that helps our society to understand and predict changes in the ecosystems and their subsystems that affect vital marine resources. The second goal is to provide scientific advice that can be used to create sound environmental policies with an ecosystem framework. This advice is provided in order to enhance society's ability foresee and respond to changes and manage risks. The third goal deals with education and outreach. Communication with individuals, stakeholders, schools, communities and industry is essential if policy and regulations are to be formulated and adhered to. Cooperation can

only be achieved through communication and participation. Our current survey, and my participation as a Teacher at Sea are prime examples of NOAA's commitment to share technical assistance and understanding. Another example of NOAA's adherence to the goals of conducting and disseminating scientific data have been the Cooperative Clam surveys conducted in 2002, 2004, and soon to be continued in July of 2005. Two of the



scientists that participated in the 2004 Cooperative Survey are currently on board our current Clam Survey. Both were happy and enthusiastic to share their experiences and are anxiously awaiting their participation in this years' 2005 Cooperative Research.

The Atlantic Surfclam supports a multi-million dollar annual fishery along the Mid-Atlantic Coast. Communities, industry, fishermen and the general population are stakeholders in these important

resources. Preserving the well being of the surfclam fishery is therefore not solely an objective of environmental agencies. Due to concerns about the status of the surfclam stock, the Cooperative Clam Surveys were developed to augment the scientific surveys that were being done by NOAA every three years. The surveys that doctors Pickett and

Nordahl worked on were cooperative efforts of NOAA, the National Fisheries Institute, The Clam Institute, the North Atlantic Clam Association, The New Jersey Fisheries Information and Development Center, the Rutgers University Haskins Shellfish Research Laboratory and the University of Virginia Institute of Marine Science have worked cooperatively to conduct these surveys. The survey area was the Mid-Atlantic Coast from the Hudson Canyon to Virginia.



This survey, however had a noticeable difference: a commercial clammer, the FV Lisa Kim, was used, as well as a commercial clam dredge. The same Stratified Random Sampling Design, utilizing NEFSC clam strata was used as had been done on the DELAWARE II three year Clam Survey. Dredge efficiency was measured via depletion experiments and monitored by using the NMFS Survey Sensor Package (SSP) from the DELAWARE II. Results from the 2004 survey were catalogued and compared with

historical survey data. Tows were made on the same random stations, using the same speed, the same tow duration, and the same count and measurement techniques were employed. The differences were the ship, the dredge and the expertise of professional clambers. Due to the lesser number of scientists on board, measurements of ages, Ocean Quahogs, Southern Quahogs and clappers were not taken. The results in some ways confirmed data that had been accumulated by the DELAWARE II. The research confirmed the patterns of surfclam population movement to deeper waters and a distinct northern migration pattern. Numbers of clams caught suggested that clam populations might be greater than had been previously suggested. Most importantly, the survey produced a sampling of data that allowed the NEFSC to compare their data with scientific data cooperatively produced with participating stakeholders. The data collected by the commercial vessel can now be used to quantify the efficiency of the equipment and procedures used by the DELAWARE II.

True to the goals of NOAA Fisheries, industry, scientists and government are working in coordination to create accurate data from which we can make informed decisions to benefit our present economic needs and the future of our precious marine environments. NOAA has in many ways accomplished its goal of outreach, cooperation and education. By empowering stakeholders and informing society, the future looks bright for the creation of policy and regulations that achieve the balance of present and future needs.

Personal Log:

The weather is absolutely outstanding. Calm seas, a slight breeze, moderate to warm temperatures and little humidity. Does it get any better? We are starting to become adjusted to our new sleep patterns, and the equipment has required little servicing. We are currently off the coast of Virginia. Have I mentioned the food is great? Everyone's favorite person is the Chief Steward. The only thing missing... Clams! Oh well, we're finding where they're not.

Signing Off, Mike, dad, AKA. Mr. Lynch