



**NOAA Teacher at Sea
Jill Carpenter
Onboard NOAA Ship DELAWARE II
September 5 – 15, 2006**

NOAA Teacher at Sea: Jill Carpenter
Onboard NOAA Ship DELAWARE II
Mission: Herring Hydroacoustic Survey
Day 5: Saturday, September 9, 2006

Weather Data from Bridge

Visibility: 3 nautical miles
Wind direction: 240 degrees
Wind speed: 15 knots
Sea wave height: 1-2 feet
Swell wave height: no swell
Seawater temperature: 19.4 degrees Celcius
Sea level pressure: 1016.2 millibars
Cloud cover: hazy skies 1/8

Science and Technology Log:

Today, the DELAWARE II left the port and steamed out into the waters of Vineyard Sound for the day. It was exciting to finally get underway. While out at sea, the AFTV underwent additional testing and troubleshooting. I was able to work the joystick which controls the video camera on the front of the AFTV and enter information into the Event Log program to document the beginning and end of the AFTV deployment. We steamed back to Woods Hole for the evening, and our scheduled time of departure is tomorrow at noon. Once we leave tomorrow, we should be out to sea for the remainder of the cruise.

Additionally, I was able to interview two other members of the crew.

The Chief Scientist aboard this mission is Fisheries Research Biologist Bill Michaels. He has worked for NOAA and been a chief scientist for 27 years. He started as a co-op student at the Northeast Fisheries Science Center. Bill's parents knew he would grow up to be a scientist when they saw him spending his time collecting feathers and examining flowers as a six-year old. He has extensive training in marine and fisheries biology and has been in charge of the National Marine Fisheries acoustic program working on advanced sampling techniques for almost 10 years. Bill has logged over 2000 days at sea and has been a part of many different research boats in many different countries! Bill believes that by incorporating advanced



**Chief Scientist Bill Michaels
on the aft deck of the
DELAWARE II.**

technologies into cruise operations, we will be able to provide more accurate, cost-effective and timely scientific information in order to meet NOAA's goals.

Mr. Michaels says the best parts about his job are the diversity associated with the work and the teamwork involved. Because of these, he has enjoyed every day of his career. Although he loves working with new technologies such as his new Advanced Fisheries Towed Vehicle, he has come to enjoy working with people more and more, especially with scientists from other countries.

Bill shared with me that he once went overboard during winter temperatures, though he wouldn't say if it was by accident or on purpose! Some of his more challenging voyage experiences include being out to sea with 25 ft waves, having to sleep in a fish bin, and being on a foreign boat that was infested with cockroaches. Bill's advice to someone who would like to become a scientist is to focus on all subjects, not just biology and math. He says that you can't be a good biologist by studying only biology. He advises future biologists to understand people, value teamwork, appreciate different cultures, learn new technologies, and study from a variety of disciplines, ranging from geology to English and foreign languages.

I also spoke with my roommate and NOAA Program and Management Analyst, Jeannine Cody. She works in the National Marine Fisheries Service (NMFS) Office of Management and Budget in the Program Planning and Budget Formulation Division. She serves a liaison to NMFS' Office of Science and Technology, the Ecosystem

Observations Program, and the Climate and Ecosystems Productivity Program. She also tracks all of NMFS' research and development activities at their six Science Centers.



TAS Jill Carpenter (far right) with NOAA Program and Management specialist Jeannine Cody, Chief Scientist Bill Michaels, and Fisheries Biologist Karen Bolles on board the NOAA ship DELAWARE II.

Each year, the President of the United States submits a budget request asking Congress for money to support NOAA activities. It's kind of like asking for an allowance and then telling your parents the reason why you need the money. In Jeannine's line of work, telling the reasons why money is needed is called a budget justification. Each fiscal year (Oct 1 through Sept 30) she works on budget justifications for NOAA's fisheries research

programs. This involves talking to a scientist to understand his/her plans for research in the upcoming year and writing a summary about the need for the activity, the cost of the

activity, and the benefits to the country. She says that although her job description changes day to day, she spends much of her time responding to questions from the Department of Commerce, the Office of Management and Budget and from Congressional staff.

I found it interesting that Jeannine first became interested in working in marine biology while watching Jacques Cousteau's TV show as child. Later, she volunteered to work with National Museum of Natural History curator Dr. Clyde Roper after watching a Discovery Channel program on giant squid. She's proud to say that one of her reference letters for graduate school had a giant squid at the top of the letterhead! Ten years later, Jeannine's back where she started as a research collaborator in the Museum's Division of Fishes.

She says the best part of her job is when her efforts are successful in getting funding for NMFS' programs. "It's nice to know that you're a part of a larger effort to understand the oceans and marine life," says Jeannine. To prepare for a NMFS career in program planning and budget formulation, Jeannine recommends a biological degree, such as one in fisheries science, marine biology, environmental biology, or environmental policy. You should be comfortable working with numbers and asking a lot of tough questions. Jeannine spends a lot of time writing, creating slideshow presentations, designing websites and talking to different groups, therefore good communication skills will help as well. Internships, fellowships and volunteering on NMFS cruises are also great ways to know how NMFS works.

Personal Log:

What a beautiful day! It was a wonderful experience to be steaming on board the ship. It was a warm, sunny day, although it was considerably cooler when we got away from land. Today was the first day that I was able to get weather and sea measurements from the bridge. I am hoping to become independent in reading the instruments that take these measurements by the time we return.

On the return trip, I was able to sit up on the flying deck (which is the top level deck) and watch as we pulled back in to the harbor at Woods Hole. The view was incredible and made me feel so far away from Virginia! Don't worry, I am still planning on returning to school on the 18th! I am sure once we begin with the more intense work load that comes with trawling and completing biological sampling, paired with the overnight (6PM to 6 AM) watch that I have been assigned to, I will be looking forward to returning to my own bed soon enough!



Sunset from Cape Cod Bay (09/09/06).

Question of the Day:

A seafaring riddle for you:

What is alive without breath,
As cold as death,
Never thirsty, never drinking,
All in mail but never clinking?