



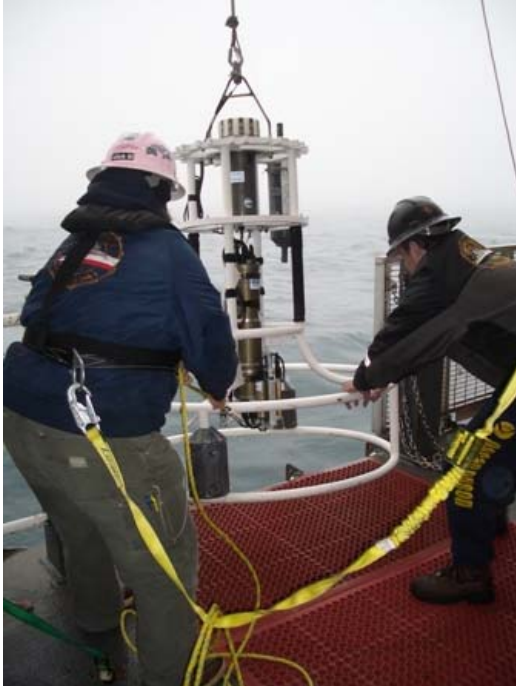
**NOAA Teacher at Sea
Rebecca Himschoot
Onboard NOAA Ship OSCAR DYSON
June 21 – July 10, 2007**

**NOAA Teacher at Sea: Rebecca Himschoot
NOAA ship OSCAR DYSON
Mission: Summer Pollock Survey
Day 12: July 2, 2007**

Weather Data from Bridge

Visibility: 4 nm (nautical miles)
Wind direction: 185° (SSW)
Wind speed: 6 knots
Sea wave height: 1 foot
Swell wave height: 2 feet
Seawater temperature: 6.2°C
Sea level pressure: 1007.0 mb (millibars)
Cloud cover: stratus

Science and Technology Log: What Does the Survey Technician Do?



Senior Survey Technician Colleen Peters and crewmember Dennis Boggs on board the OSCAR DYSON recover the CTD equipment.

Among the crew of each NOAA research vessel are typically one or more survey technicians. On each cruise a team of scientists come on board to do research; the survey technicians are the onboard scientists who provide continuity in data collection during all operations, as well as maintaining a number of onboard laboratories. The survey technicians are responsible to ensure all the scientific equipment is running and is accurate, as well as assisting the science team with their research.

One task that falls to the survey technician is to collect data as needed using the Conductivity, Temperature and Depth (CTD) sensor. The CTD equipment is mounted on a frame called the “rosette,” and is deployed over the side of the ship at the request of the science team. The survey technician coordinates between the science team, the bridge and the deck crew to successfully complete these casts.

The science team can indicate the position at which the data are to be collected, and the officer on the bridge holds the ship in position and on station. The deck crew then assists the survey tech in lowering the delicate rosette into the water. Once the pumps are running, the rosette is lowered to the required depth. Information from the sensors is relayed back to the ship through the cable, and if needed a water sample can be collected from any point in the water column. After the CTD is brought back on board, the survey tech processes the data and relays it to the science team.

On the OSCAR DYSON, Sr. Survey Technician Colleen Peters must also maintain several labs: the dry lab, chemistry lab, hydrographic lab (nicknamed “the garage” by the crew), and the fish processing, or wet, lab. The Survey Techs also participate in shooting and hauling the trawl nets by setting up and retrieving sensors on the nets. When the catch is brought on board, they work alongside the scientists to process the sample. There are several other systems to be maintained such as the Scientific Computer System (SCS), which continuously collects data from hundreds of sensors mounted all around the ship, the scientific seawater system, which measures sea surface temperature and salinity, and the Continuous Underwater Fish Egg Sampler (CUFES), which filters the surface water for plankton and fish eggs for analysis.



Senior Survey Technician Colleen processing CTD data

Colleen is a graduate of Maine Maritime Academy, where she obtained a Bachelor of Science degree in Marine Science. “I chose marine science because I knew I wanted to be at sea and I like doing science in the field,” she commented.

Personal Log

The late shift has become easier, though I still struggle between 1-4:00 a.m. if we’re not processing fish. We passed very near St. Matthew Island yesterday, but the infernal fog prevented us seeing it or many of the seabirds that are surely nesting there. Each time we reach the northern end of a transect the water temperatures are too cold for pollock, and our sampling slows down considerably. We have done some jellyfish and euphausiid samples, and we’re back in an area with plenty of fish, so plenty of sampling, too!

Question of the Day

The answer to yesterday’s question (What is an “otolith” and why is it important?): In fish, the otolith is a calcareous “bone” that plays a role in hearing and balance; it is often referred to as a fish’s “ear bone.” Otoliths are used by scientists studying many types of fish to learn the age of the fish. As the fish grows, two rings are visible in the

otolith: one for winter, and one for summer. The two rings together can be counted as a year in the life of the fish, and thus scientists are able to find the age of most fish by harvesting the otolith, cutting it in half, and counting the rings.

Today's question

What is conductivity?