NOAA Teacher at Sea
Claude Larson
Onboard NOAA Ship ALBATROSS IV
July 23 – August 3, 2007

NOAA Teacher at Sea: Claude Larson
NOAA ship ALBATROSS IV
Mission: Sea Scallop Survey
Date: July 31, 2007
Time: 20:30
North Atlantic Ocean

Weather Data from the Bridge
Air Temperature: 17º C
Water Temperature: 18.3º C
Wind Speed: 10.8 knots
Wind Direction: W
Latitude: 41 24.54 N
Longitude: 66 34.50 W
Cloud Cover: 8/8
Humidity: 100%

Science and Technology Log
NOAA ships are equipped with the necessities for successful scientific research and sea voyages. Much of which goes unnoticed, unless a specific set of circumstances arises. With these capabilities, there is an understanding that not only does the ship have a wealth of material resources, but the ship's crew has been trained in the operation, maintenance and procedures required for use of all of these devices. One aspect of gear and training I'd like to focus on is this log entry is the SCUBA capabilities on board. I caught up with the ship's Dive Master and Executive Officer, LCDR Kurt Zegowitz to get a better understanding of what the SCUBA team does on board the ALBATROSS IV.

Dive Master and Executive Officer Kurt Zegowitz (left) and Commanding Officer Steve Wagner (right) inspect the hull of the ALBATROSS IV prior to setting sail.

The ALBATROSS IV SCUBA team also includes crew members Commanding Officer Steve Wagner, Operations Officer ENS Chris Daniels, and Navigation Officers ENS

Chad Meckley and ENS Chris Skapin. Their primary responsibility is ship husbandry or taking care of the ship's hull. To ensure proper operation of the ship the hull must be inspected, usually before each sail. The propeller is checked for line entanglement. The bow thruster, transducers and sea suction intake grates are also cleaned. The sea suction intake grates allow sea water to be brought in to cool the engine as the boat steams along. While in Woods Hole, the crew also helps the aquarium by clearing the intakes for their sea water supply.

Some other aspects of SCUBA team work throughout NOAA include research, sample taking and fish collecting. For example, on research trips off of the Hawaiian Islands scientists will have the divers collect species of fish and other sea creatures for scientific study. In order to collect fish, the divers use a Hawaiian sling and collect the fish in a bag that is attached to their leg and towed behind them at a distance of about 30 feet. This precaution protects the divers in the event that a shark in search of the injured fish is in the area.

NOAA Corps personnel who choose to receive SCUBA training can go to one of two sites, Seattle, Washington or the Florida Keys. The basic training requires three intense weeks of work with SCUBA gear and dives. Upon completion of the training they receive the title of working diver and with increased experience and training can move up to advanced diver, master diver and diving instructor. NOAA divers are required to dive every six weeks and do so in both warm and cold water. They have wet suits for warmer weather and dry suits for colder months.

Now for a quick physics lesson. The SCUBA air tanks are filled with compressed air and weigh approximately 35 pounds when full. Which is quite a lot to tow around on land however, in the water the buoyant force equalizes the weight and the divers can float easily even with the 35 pound weight on their backs. The air lasts for approximately 40 minutes give or take, depending on their rate of breathing and lung capacity. The divers must also wear weight belts to help them stay submerged easily. Some physics here again, the larger you are the more buoyant you are and the leaner you are the less buoyant you are. This means that if you a larger person you will need a heavier weight belt to keep you submerged, whereas a thinner person will only need a small amount of weight. Again, these belts feel like they'd be rather uncomfortable to wear on land, but with the counter force of buoyancy the divers do not feel the weight once they are in the water.

Although modest about his skills, it is obvious that Kurt is an accomplished diver and that he enjoys it thoroughly. SCUBA training has given Kurt opportunities to dive in Hawaii, Alaska, Seattle, New England and the Chesapeake Bay. He's been up close and nosey with tiger sharks at 80 foot depths and has seen giant kelp beds and coral reefs. Executive Officer LCDR Kurt Zegowitz encourages anyone from the Corps who is interested in becoming SCUBA certified to go through training with NOAA.