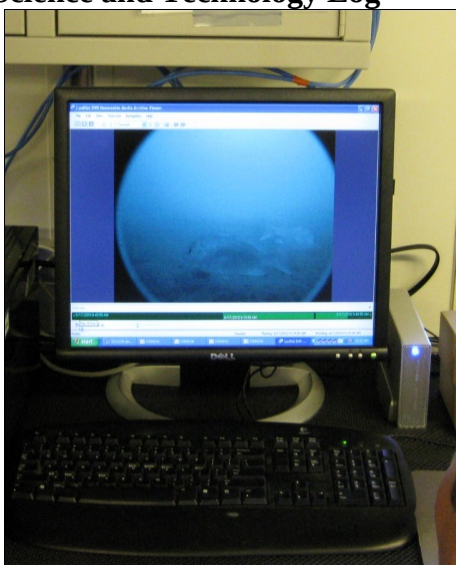
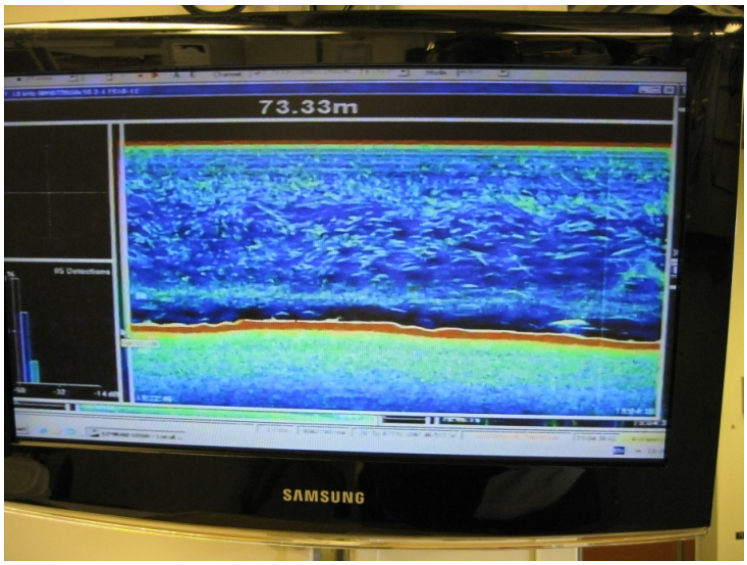
NOAA Teacher at Sea
Nicolle Vonderheyde
Onboard NOAA Ship *Pisces*
June 14 – July 2, 2010

Nicolle von der Heyde
NOAA Ship *Pisces*
Mission: SEAMAP Reef Fish Survey
Geographical Area of Cruise: Gulf of Mexico
Date: Friday, June 25, 2010

Weather Data from the Bridge
Time: 1000 hours (10 am)
Position: latitude = 27°53.9 N longitude = 093º 51.1 W
Present Weather: 5/8 cloudy (cumulonimbus/cumulus clouds)
Visibility: 10 nautical miles
Wind Direction: E **Wind Speed:** 4 knots
Wave Height: 1 foot
Sea Water Temp: 30.5°C
Air Temperature: dry bulb = 29.2°C, wet bulb = 26.3°C

Science and Technology Log



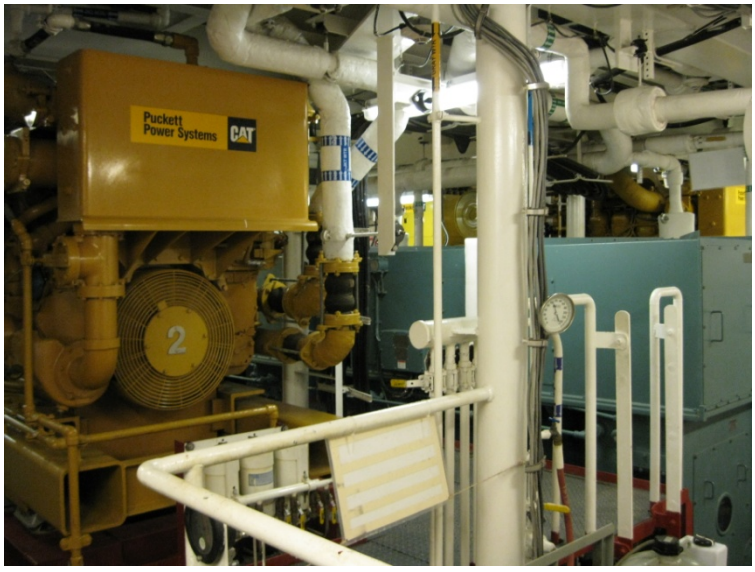


The technology on this ship is amazing! The picture on the left is video of what the camera array filmed yesterday. The fish just swim around and sometimes they even come right up to the camera like they are "kissing" it. Then they back away and swim off. It's beautiful to watch. The picture on the right is the EK60 Echo Sounder. The red line that you see shows the bottom of the seafloor. The blue above the red line is the water itself and the white specks that you see are fish. The most recent reading is located on the right side of the screen. The echo sounder

sends a “ping” to the computer and that “ping” is a fish. Sometimes we can see definite shark outlines in the images below our ship. If you look at the bottom right hand corner of the echo sounder photo, you will see a large white speck along the red line. This indicates a large fish (possibly a shark) trolling the bottom of the ocean. When we came upon the dead sperm whale, the Electronics Technician (ET) came to the lab and told us there were a lot of “large fish,” most likely Mahi Mahi or even sharks, swimming under the ship.

The *Pisces* would not be able to operate without the engineers who make sure that everything onboard is functioning properly, including the 4 massive diesel generators that power the ship, the freshwater generators that convert seawater into fresh drinking water, and the hydraulics that power the cranes to lift the cameras in and out of the water. Chief Engineer Garet Urban leads the team of engineers, oilers, and electrical experts who take care of all the mechanical issues on board the ship.

First Engineer, Brent Jones, took us on a tour of the very impressive engine room on the lower deck of the *Pisces*. He showed us the incinerator which burns all the trash, oil filters, and other waste at a temperature of 1200°C (2192°F). Paper, plastic, and aluminum is brought back to shore and recycled. Before entering the engine room, we were told to put in earplugs because the sound can damage your eardrums. In addition to not being able to hear a thing inside the engine room, the heat is incredible! The engineers need to be careful to stay hydrated while working in these conditions.



The *Pisces* is powered by 4 diesel fuel generators which generate electricity that drives two large electric motors. The photo above on the right shows one of the generators in yellow. The engineers are constantly monitoring the mechanics of the ship to make sure everyone on board has a safe and productive voyage while conducting scientific research on board.

Personal Log

Every week the ship is required to conduct emergency drills. Yesterday after dinner, the alarm sounded 6 short bursts and an announcement came on saying, "This is a drill…abandon ship, proceed to your muster stations…this is a drill." We had to go to our rooms and grab our PFD's (personal flotation devices), survival suits, a long sleeve shirt, long pants, and a hat. We then proceeded to the 0-1 deck where two officers were in charge of making sure that everyone on their list was present and accounted for. After attendance was taken the drill was over; however Melinda and I wanted to try on the survival suits because no matter who you are, you can't help but look and feel silly in what the crew refers to as a "Gumby suit" – for obvious reasons. Two of the officers joined us in this cumbersome and entertaining task.

Never has the routine of an emergency drill seemed more significant than the next morning, shortly after arriving in the lab, when the general alarm sounded and an announcement came on saying, "This is NOT a drill…smoke has been detected near the bow thrusters on the lower deck…repeat, this is NOT a drill." It took a second for me to register that this was a real emergency and we all quickly moved to the conference room - the muster station for the scientific party. On the way into the room, I smelled something burning and heard in my head the ominous words of one of the scientists during a previous fire drill, "One of the worst things that can happen at sea is a fire." Now I was nervous. The Chief Scientist called the bridge to let them know that we were all accounted for and asked if we could move because we smelled smoke. We moved to the main deck and waited…not very long actually. Within a matter of minutes an announcement signaled that the fire was secure and we were free to carry on with our business.

The bow thrusters had overheated and fortunately, someone was working near them when the smoking started. Because the ship conducts fire drills on a regular basis, including the simulation of putting out specific types of fires, everyone knew where to go and the crew had the smoking under control very quickly. It was reassuring to know that the crew is so prepared to handle emergencies at sea. I will never again complain about the routine task of emergency drills, especially at school. Preparation and planning is the key to keeping everyone safe.