



**NOAA Teacher at Sea
Melinda Storey
Onboard NOAA Ship *Pisces*
June 14 – July 2, 2010**

NOAA Teacher at Sea: Melinda Storey

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 = 093° 51.1 W

Present Weather: 5/8 cloudy (cumulonimbus/cumulus clouds)

Visibility: 10 nautical miles

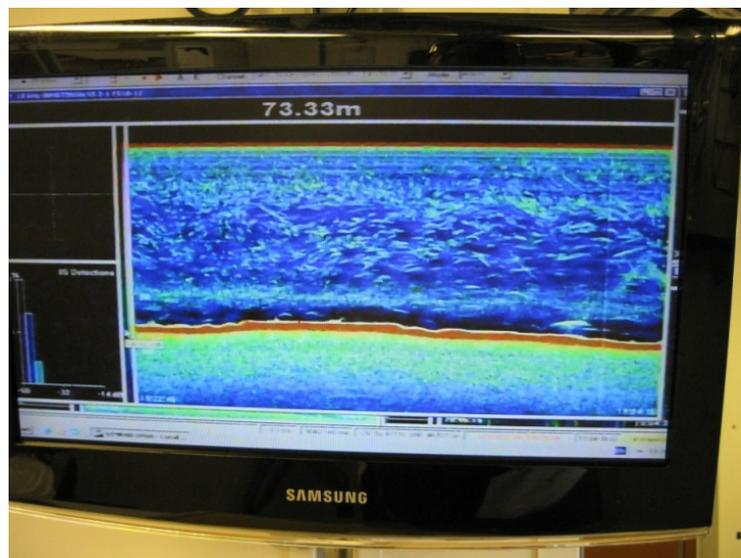
Wind Direction: E **Wind Speed:** 4 knots

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

All this technology on board makes me drool! The *Pisces* is certainly a beauty of the NOAA fleet. Each morning Chris Gledhill, our fishery biologist, looks at the video from the camera array and I'm hanging just over his shoulder watching all the coral and fish. It's really interesting to see the fish swim by the camera and now I can even identify some of them. I never knew there was a type of coral called "wire coral." It looks like curly-cue wire used in floral arrangements. One of our deck hands caught some on his fishing pole one night and when I held it, the coral moved! Wire coral is a living creature so, of course it moved!

What I thought was really funny was watching a big grouper swim by the camera and then we caught it on the Bandit Reel. Nothing like seeing your fish before you catch it! Here you can see Paul Felts and me holding the 21 pound grouper.



Just like school, the *Pisces* has drills – fire drills, man overboard drills, and abandon ship drills. It's always good to be prepared. When we have an abandoned ship drill we have to put on our "Gumby Suit." This survival suit would protect us by keeping us afloat and warm if we really had to go into the water. The Gumby Suit is not exactly the latest fashion but I would certainly want it if I have to abandon ship.



The day after this Abandon Ship drill, we had a REAL fire drill. Over the PA system we heard, “This is not a drill. This is not a drill.” The forward bow thruster was smoking. We “mustered,” or gathered, on the second deck, but when we got there we could really smell smoke. So, we were sent down to the main deck for precaution. Fortunately, we have an outstanding crew who fixed the problem immediately.

New Term/Vocabulary

Muster – to gather

“Something to Think About”

While on the bridge last night, I heard on the radio another ship broadcast they were “taking on water.” What would you do if you were on a boat in the Gulf and it suddenly started taking on water?