



NOAA Teacher at Sea
Nancy McClintock
Onboard NASA Ship LIBERTY STAR
June 7 – 14, 2006

NOAA Teacher at Sea: Nancy McClintock

NASA Ship: M/V FREEDOM STAR

Mission: South Atlantic MPA's: Pre-closure evaluation of habitat and fish assemblages in five proposed no fishing zones

Day 2: Thursday, June 8, 2006

Weather Data from Bridge

Visibility: unlimited

Wind direction: S/W

Average wind speed: 7 knots

Wave height: 1-2'

Air temperature: 78°F/25°C

Cloud cover: None

Barometric pressure: 1011 mb



Early morning sunrise 50 miles off the coast of North Florida viewed from the deck of

Science and Technology Log

The FREEDOM STAR left Port Canaveral at 0010 and traveled 92.3 miles north during the night of June 7. At about 0800 the CTD was launched and recovered successfully in the Option 2 area about 50 miles off the coast of North Florida. A fish trap baited with Spanish mackerel was deployed with high-flyer floats as markers for a later retrieval. After overcoming a few difficulties, the ROV was launched to a depth of 207' and rested on the ocean floor. Visibility was excellent and two successful transects were accomplished. The bottom consisted of mixed hard bottom that visibly contained invertebrate species such as black coral, *Oculina varicosa* coral, *Lophelia pertusa* and other branching corals as well as basket sponges and various algae. In addition, sand with several good ledges was encountered. The fish were most prolific in areas where the most relief was seen. Fish species spotted included tomtate grunts, scamp (a type of grouper), three types of porgies, blue angelfish, reef, bank and spot fin butterfly fish, blue and queen angel fish, almaco and greater amberjacks, yellow tail reef fish and many other types of damsel fish, filefish, scrawled cowfish, and Cuban hogfish. After the ROV run, the fish trap was retrieved with two red porgies that were measured and released. The camera array with four video cameras was dropped to the ocean floor for 30 minutes and then retrieved. After cruising approximately 26 miles north, a similar protocol at Option 1 was repeated.

Personal Log

The ignition of the diesel engines and the roar of the bow thrusters was just the beginning of my first real night as sea. I felt like I was in a flight simulator at an amusement park

for six hours. I am beginning to get my “sea legs” and have learned that motion sickness medicine helps and that you have to stand with a wide stance without locking your knees to prevent losing your balance. Walking on deck in the early morning presented me with one of the most beautiful sunrises I have ever seen. What a wonderful way to begin a day! The deployment of the research equipment and the recording of data is a key component to the mission of this cruise. I recorded digital pictures with a laptop computer of the ocean floor images relayed from the ROV and helped wherever I could be of assistance. The retrieval of the almost empty fish trap brought groans and moans from the crew. However, seeing a huge Loggerhead Sea Turtle, *Caretta caretta*, surface next to the ship will be in my dreams tonight.

Until tomorrow...
Nancy

Question of the Day

Answer to yesterday’s question:

The FREEDOM STAR holds 44,000 gallons of diesel fuel in ten tanks. A gallon of diesel fuel costs approximately \$2.25. Just imagine the fuel costs for this week!

Today’s question:

If the government designated certain areas as Marine Protected Areas and limited their public use, how would this affect the ocean ecosystem?

Addendum 1: Glossary of Terms

Millibar (mb): a unit of pressure equivalent to 1/1000 atmospheres of pressure.

Atmosphere: a unit of pressure that is the average air pressure at sea level.

Transect: a sample area taken along a straight line used to estimate populations and habitat coverage.

Option: Proposed areas for deep water MPA’s that are under evaluation. Each MPA has 2-3 Options for a total of eleven.

Prolific: found in abundance or in large amounts.

Relief: distance above or below relatively flat, featureless sea bottom.

Protocol: a series of steps and procedures used in an operation.

Addendum 2: Officers and Crew of the FREEDOM STAR

Captain: Walter Exell

Chief Mate: George Kirk

Second Mate: Mike Nicholas

Boatswain (Lead Seaman): Darrell Hoover

Ordinary Seaman: Cody Gordon

Able Bodied Seaman: Allan Gravina

Cook : Patrick Downey

Retrieval (Crane Operator): Wayne Stewart

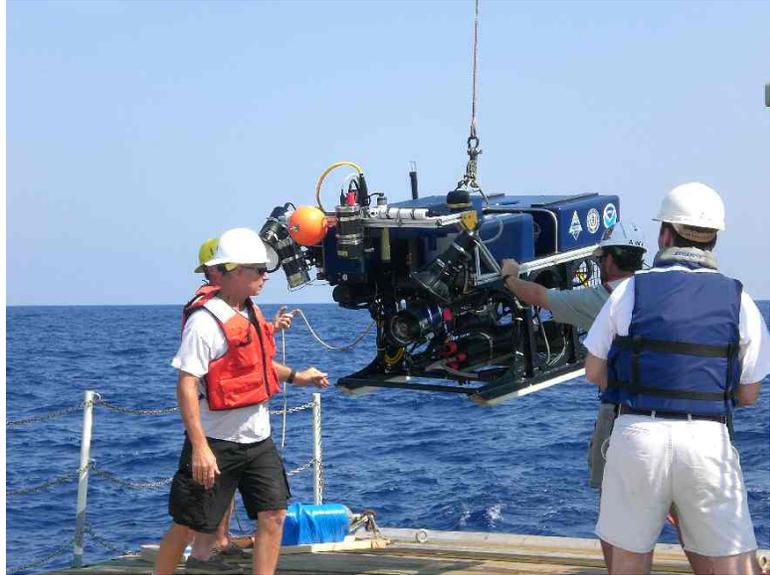
Retrieval (Crane Operator): Darin Schuster

Deck Supervisor : P.J. Zackel

Chief Engineer: Tim Freeley

Assistant Engineer: John Heer

Recording digital images relayed from the ROV at 207 feet below the surface of the ocean.



Deployment of the ROV by NOAA scientists and crewmembers at Option 2 from the rear deck of the FREEDOM STAR.