NOAA CORAL REEF CONSERVATION PROGRAM

Sea Floor Characterization of the U.S. Caribbean
2011 Field Season
Day 8: April 4, 2011

Living on the *Nancy Foster*

Scott here, writing my final blog. The first leg is almost over and it's a good time to reflect on the past week. The research has been wonderfully discussed in previous blogs, but little has been mentioned about ship-board life. When I first boarded the ship, clambering up the steel gangplank with my green Hawaiian-print duffle that screamed 'tourist', I was not sure what the following week would throw at me. I entered my four-person stateroom, picked a bed, unpacked my clothes, and quickly rendered my green duffle invisible. As I explored the ship, I was amazed by the amenities. In ten minutes of wandering on two levels of the ship, I acquainted myself with a movie theater, two toilets, three showers, a well-stocked gym, a laundry room, a kitchen and mess hall, a friendly crew of 24, and a wonderful team of 14 scientists. My forehead alone met the tops of four door frames, each time with a resounding thud.

Chief steward Lito at work in the *Nancy Foster's* kitchen.

Life on board the R/V *Nancy Foster* has been great. Celebrity's mansions have been less-well equipped. The stewards whip up delicious meals, each with many options. I ate oatmeal my first breakfast, a vegetable omelet the next, and Quaker oatmeal squares the following. Lunches and dinner are also fantastic, the coffee pot is always full, and the fridges well stocked with ice cream. Good food is a great morale boost, which, believe me, is very important when your work day starts at 4 PM and ends at midnight. The midnight to 8 AM shift probably agrees. Off-shift recreational options range from sunbathing on the "steel beach" on the highest deck to frantically trying to maintain balance on the treadmill while it automatically inclines and the ship rolls, pitches, and heaves. The sensation can aptly be compared with trying to run three miles after rolling down a hill for an hour.

Some of the amenities on the NOAA Ship Nancy Foster include the mess (left); the exercise room (center); and the 'steel beach' (right).

The Science

On to today's research, which has been a 24-hour fishery acoustics marathon spearheaded by Chris Taylor. Much of the day was spent running acoustic lines over College Shoal, southwest of St. Thomas. Emitting one of three frequencies of acoustic energy – 38, 120, or 200 kilohertz – at an incredible rate of six times per second, Chris is able to locate fish in the water column in three dimensions. Rather, the acoustic equipment is able to do this and Chris engages in the time-consuming task of processing the data and making sense of it. One type of data he analyzes is known as an echogram, which is a two-dimensional representation of fish in the water column. An echogram contains information on the fish's size and depth in the water, and seafloor depth.

Chris Taylor (closest to camera) and Lance Horn go looking for schools of fish with the ROV.

The observations thus far have revealed a variety of fish. During ROV dives today, Chris and ROV operator Lance Horn spotted many fish, including yellow tail snappers, damsels, and groupers. They even saw a Nassau grouper, which is a rare sight these days as pressure from overfishing has caused the decline of many larger fish. The purpose of the fish acoustics/ROV work is to track the number of fish, their movement, and the habitats with which they are associated. This information is used to gain a better understanding of how fish use these habitats, which will hopefully improve management decisions of the reefs around Puerto Rico and the Virgin Islands.

Tomorrow we arrive at St. Thomas, which is known for attracting a large volume of cruise ships that unleash hordes of camera trigger-happy tourists on the surrounding countryside. I am sure I will blend in very well with my duffle.

This large school of horse-eyed jacks (left) was one of the first schools we tracked with the ROV; next we saw this school of spadefish (center); and we also saw this small school of colorful fish darting away from the ROV. And that was only the beginning!