

Day 77-83: October 1-7, 2010

It was a busy port stop. The engine was fixed on Monday October third. It was the oil cooler and the part was not in by Friday so we had to wait until Monday for the repair. It mattered little as the weather and waves were so bad that we could not return to sea. The good news is the weather looks good for the next week at least so we left this afternoon to be on deepwater by tomorrow morning. The water is a bit rough tonight and some will be seasick, but we wanted to maximize our time on good water so we figured on night would be fine.

To reset our stage for you. From Ocean Alliance are still Captain Bob, First Mate Ian and Deckhand Bailey. From USM is still me, Johnny, Matt, Sandy and Monique. Now, Shouping Huang and Jane McKay have joined us for this leg. Both Jane and Shouping work in my laboratory. Shouping received his Master's in statistics from USM and Jane is now finishing her Biology degree. Both are married and have children.

While in port, we visited a number of places and made connections and possible collaborations. We went to the Grand Isle Marine Laboratory. It is a relatively new state government research facility. Only problem is that they have only been able to start research this week. It seems it was finished just before Katrina and so they were dealing with issues around that and then they were dealing with oil. It's a nice facility and when up and running will be quite good. I really liked the director as he had a clear and straightforward perspective on the goals and obstacles of fisheries management and wanted to start researching some interesting and creative solutions to bycatch issues.

Bycatch if you are unfamiliar with the term that means those things you did not want to catch. So if you are trying to catch fish X and you catch 100 other kinds of marine animals and 1 of fish X, well the others are considered bycatch, discarded and usually die. This bycatch is a huge problem because of the number of animals killed for nothing.

Anyway, the facility was nice. Had bunks for 45 people. Sandy and I had seen it in June during our visit to Grand Isle and it was crawling with military vehicles. Turned out 100 troops were there to oversee the oil spill- even though there were only 45 bunks- the rest slept on floors. Remarkable and crowded. Most are gone now.

We also went to LUMCON. That stands for Louisiana Universities Marine Consortium. It is a facility in Cocodrie Louisiana and serves as field station for most of the Louisiana Universities. Cocodrie is as remote as Grand Isle and Port Fourchon, with a population of about 300 that has swollen to 3,000 with BP workers there for the spill.

It was also a very impressive facility with many labs, dormitories and apartments. They do a lot with plankton and aquaculture and have a large boat like the USM (south) boat. No marine mammal work and not much toxicology per se though they do work a lot on the dead zone where the Mississippi enters the Gulf and there is no oxygen so

everything is dead. Another big problem. They also had a poster on subsidence, which is to say those parts of Louisiana are sinking. It was stunning to see how much land has sunk in the past 150 years and it's getting worse. You can see we are learning lots about the problems in the Gulf States.

We also went to Tulane and met with the Director of their Center for Bioenvironmental Research and some other folks. This visit was not a tour but rather we all met for several hours and talked about what each other did and their very novel and successful approach to research. Their research paradigm shift from purely basic or purely applied research to "useful" research increased their student applications by 45,000. Stunning. We found lots of common ground and one scientist and I have already started collaborating and the Director is going to try and include us in a research consortium he is building. He and I are also going to try and cohost, in New Orleans (where Tulane is), a Gulf Oil research conference. The current conferences are limited and exclusive.

Our other efforts focused on sampling. Johnny and Matt went fishing for fun and then realized they cannot eat the fish so they may as well use them for research samples. They caught fish, shrimp, and jellyfish. I decided we should sample off the pier in Grand Isle to see what we might find. So we went on Saturday as on Friday when we scoped it out it was vacant. But Saturday had many local fishermen and they caught HUGE fish. 45 pound redfish and stingrays. It was fun to watch for a bit, but we figured water and sediment sampling were out.

Our plan then was to go Monday. I figured Sunday would be busy with recreational fisherman, but Monday would be empty of people. We would go early, before 9 am, to get there before the BP workers and avoid calling attention to ourselves. However, we were surprised to find when we arrived the beaches crawling with the BP workers. But the pier was empty so we would just have to hope no one bothered us. Matt was working on sediments and Johnny of fish and my job was to watch the pier for anyone coming. It is a long pier so there would be time to adjust should we see anyone.

We collected sediments and we caught fish. We still had water and other sediment locations to go, when a group of four people started down the pier. We hid the water and sediment sampling equipment and focused on watching Johnny fished. It turned out to be 4 older women on vacation. No worries and we waited while they enjoyed the views. They left and we resumed our sediment sampling.

Then came some tense moments and perhaps the most sobering moment of the voyage. I looked down the pier and there was a group of 15-20 men walking in a very deliberate fashion down the pier. These were not tourists. Then I saw in the middle of the group, men dressed in full military fatigues. Nope. Definitely not tourists. I quietly went to Matt first- "stow the stuff, it's time to go". I told him. He started to discretely pack.

Then I went over to the fish cleaning station they had at the end of the pier. Johnny and Monique each had a fish in hand ready to start cleaning. I apprised them of the

situation as they were starting to process the fish. Johnny was just beginning a cut into the belly of a fish. Suddenly, he gasped. Oil was gushing out of the fish's belly! Monique gasped as well and started her cut and her fish too had a belly full of oil. Mind you they had not cut into the stomachs, this was just oil in the belly cavity of each fish. Matt came over and looked and he too was stunned. I think at that moment, the entire oil crisis was suddenly very, very real. You see up until that moment we had seen no oil and so I think there was an element of detachment as one could only imagine it was present. But here it was very real pouring from inside a fish.

For me, it was a bit different. I was saddened to see the oil coming out of the fish, but I had had my shock when Sandy and I had seen the oil in the water off this very pier. I was more caught up in the events at hand. I had two students holding fish gushing oil in their hands and 15-20 officials coming down the pier for some unknown reason, possibly to question us. For me, job one was to get off that pier with my students and samples intact and we still had not managed a water sample. That sample would be no simple feat as we were 40 feet above the water.

Then we caught a break. The group had stopped mid-pier. They were not likely there to speak with us though we would be unable to leave without passing through them. I told Johnny and Monique to stop and we would finish the fish processing on the boat. They were to bag the fish and put them in the bottom of the tackle box. We quickly took a water sample, packed the bottles under the fishing net, gathered our stuff and headed out. The goal was to look like a fishing group. We passed through the group of men. They only asked about our luck, which we told them we didn't catch a large fish. Phew!

Next up was a janitor at the end of the pier. He wanted to stop and talk fishing so I sent the students ahead with the stuff to load the car. After we exchanged news and tips, he told me that the group on the pier were all the bigwigs. BP, Coast Guard, National Guard, Fish and Wildlife all the decision makers deciding how much longer to clean the beaches. I wished him well and we got the samples to the boat and processed and off to USM where they should soon arrive.

We showed the fish pictures at Tulane. They were stunned too. I have attached one for you to see. Note the black oil covering the internal organs of the fish.

We are back at sea. We will head south to 1000 meters and look for sperm whales again. Then at about Pensacola, Florida we will head in to the 200 meter line and look for Bryde's whales and end in St. Petersburg. The weather forecast is great for as far out as we can see so this time maybe we will get there. A NOAA boat is also headed that way for the same purpose. Kait the student from Scripps is on that boat. It will be an interesting comparison of their \$38,000 a day boat versus our \$6,000 a day boat, though I doubt they will tell us anything. I just hope we don't find ourselves each upon the same whales at the same time. We shall see.

Glad to be back out at sea and the team is in good spirits and raring to go. I have also included a picture of the chart we are navigating by tonight so you can see all of the oil

platforms. They are the pink spots. We are the large black blotch that kind of looks like a boat near the top by the jagged dark line.

John



