

Johnny Wise's Reflections for Leg 6

Days 76-83 – Thursday, September 30 – Thursday, October 07, 2010 – Port “Fo-sho” Portage

We pulled up next to the coast of Louisiana and anchored a couple miles off shore while Capt Bob went to check out some places for us to dock. The problem with Louisiana for us is there is a lot of shallow water all along the coast, and the places where there is water deep enough are filled with the oil rig boats (they are all in due to the moratorium on offshore drilling). So there weren't many options for us. As the hours passed by, I chose to utilize the time to study. After an hour or two of studying, I couldn't resist the urge to sleep. The past few days made me very tired, and reading only exacerbated that. I woke up to find us 10 ft from shore. Matt was already on shore and Capt Bob was trying to figure out how to get the boat docked. Then we got stuck in the mud. So, our engine broke down 100 mi offshore, three days later we made it all the way in except for the last 6 ft. I jumped ashore, a bit of a tricky task. We docked at an empty lot with a row of broken pilings a few feet from shore. This would be my first parkour jump (I decided to take up parkour as another activity, and have been doing what training I can on the boat). No problem. On shore, Matt and I started to search for something to use as a bridge from the pilings to shore. I found an old electrical cable sign, Matt found an unused “For Sale” sign with two long posts to hold up the sign. Our initial idea was to use my sign and Matt's posts – but it was a bit sketchy. Then Capt Bob brought out a couple boards from the laz, and we had our gangway.

Port Fourchon (aka Port “Fo-sho”) is a dead town that has nothing in it. Currently, though, it is full of BP workers, and the beach down the street is closed to the public (most likely due to oil clean up efforts). Port Fourchon is also about a 15min drive from Grand Isle, where Dr. Wise and Sandy visited in June and saw the beach and water covered in oil. Dr. Wise arranged for an enterprise car to pick him up – and they did, drove right into the empty lot!

On Friday Dr. Wise, Dr. Bob, Sandy, and I went to Grand Isle State Park to check out the scene. The area seemed to be teeming with life; there was an osprey with a fish at the end of the pier, lots of pelicans flying around and fishing, dolphins jumping and tail slapping, and schools of fish visible at the surface. There was no more oil on the beach or in the water, but there were still tar balls on the beach – and a bunch of BP workers collecting them. Also, there were a couple mountains of sand and tar balls that had been collected. BP's plan for cleanup is to excavate the polluted sand. I don't know what their plan is after that (hopefully they will figure out a way to separate the tar from the sand and return the sand). A sand mountain – it's about the size of an 18-wheeler, and there were about 6 of these on the beach.

Saturday Dr. Wise, Matt, Monique, and I returned to Grand Isle State Park with the intention of collecting some samples (i.e. fish, water, sediment) for analysis. Unfortunately there were a bunch of locals fishing, so we decided to hold off until another day – we would be back on Monday. It is quite remarkable how many people

fish down here – it seems like the major pastime. On our way to Grand Isle State Park, we must've seen at least 100 people fishing on the side of the road. The road has a marsh stream that runs along either side for the majority of the drive. Did I mention there was nothing in Port Fourchon? There isn't, it's just all marsh. This also gives one a sense of how important the marshes are to Louisiana. It's not just a few miles of shoreline marshes, its several hundred miles of marshes that stretch along the coast and well inland.

On Saturday, we also said farewell to Tania, Dr. Bob, Kait, and Steve. Their time on the boat had come to an end and they had to get home. Saturday was also Sandy's birthday, so Dr. Wise, Matt and I celebrated with her for dinner in New Orleans. After dinner we went to Bourbon St and went our separate ways (for obvious reasons). Matt and I had never been on Bourbon St. I doubt I will make an effort to go back. It is a very dirty street, and reminded me of what an old pirate haven must've looked like – strippers and hookers, alcohol and tobacco, trash in the streets, and drunk people stumbling all over the place. Not my scene, but I was glad to get the experience.

Monday we returned to Grand Isle State Park, it was empty. So we took out all our gear and started collecting samples. Matt collected sediment samples, while I started throwing the cast net to catch some fish. Monique stepped in to assist us when she could. I ended up catching 4 black mullet and 18 very small unidentified fish (and a handful of jellyfish). Two of the mullet were smaller, so I tried using them as bait for bigger fish (as I saw done on Saturday). I cut one in half, and the other I hooked. It was really windy and the seas were choppy, making it difficult to throw the cast net (and the sediment sampler, I'm sure). After a couple samples were collected, a group of ladies started walking up the pier – they were tourists. Dr. Wise directed us to stow our science gear, and look like we were just fishing. I continued to use the cast net and tend to the two fishing poles I set up while Matt and Monique talked to the ladies and Dr. Wise talked on the phone at a distance. After they left, we resumed collecting samples. Monique and I started to process the two larger mullet. As we made our first cut into the fish, black crude oil seeped out of the fish. And of course, as this was happening, another group of people were walking down the pier. But these were clearly not tourists. Turns out they were BP executives from all different branches, checking in on the clean-up. Among them were also some Navy and Army guys. Again, we hid our science gear and packed up to leave. But the water sample hadn't been taken. So I dropped over a big bucket, making it look like I was rinsing the bucket, then filled up a couple bottles while hiding behind Dr. Wise and the railing (we also had glass bottles which we weren't supposed to have). With everything packed up, we walked down the pier, they asked if we caught anything (we couldn't hide the fishing poles), and we returned to the boat. Regarding the two mullet with oil in them, Monique and I filleted and gutted them at the boat. We save the majority of the organs (all of which were covered in oil). I know that this is not normally what the fish is supposed to look like, because I processed some mullet that I caught next to the boat, and they have white meat usually.

Monday is also the day our new crew members arrived – Jane McKay and Shouping Huang. Jane just graduated from USM and has been working in our lab for the last few years. She joined us to NASA's Reduced Gravity Student Flight Opportunities Program and flew on the Vomit Comet with me and James last summer. She is still working in our lab as staff. Shouping is a staff member at our lab. He is a very quiet Chinese man (though I'm not sure if this is just because he is not confident with English). His English has improved remarkably since I left Portland – I'm sure this is partly because he really wanted to come on the voyage and Dr. Wise said he had to be able to speak louder and clearer.

Tuesday Dr. Wise, Matt, Sandy and I visited Louisiana's Department of Wildlife and Fisheries in Grand Isle then Louisiana Universities Marine Consortium (LUMCON). The Dept of Fisheries was just getting started, so they didn't have any research going on and were just moving in. Nonetheless, they had a very nice facility. LUMCON is a research facility that focuses on the marine environment. They have a few scientists that are based there, and space for guest researchers. They also have apartments and dormitories on site (it is a very isolated location). Another very impressive facility with interesting research and an astounding ability to reach out to K-12 classes and other colleges via video conferences.

Wednesday Dr. Wise, Sandy, Matt and I returned to New Orleans to visit Tulane University. We thought we were going to get a tour, but it turned into Dr. Wise presenting our voyage. A handful of scientists joined us to listen. They all were very glad to meet us, and liked the idea of collaborating with us in the future. The director of the center we were visiting then met us for breakfast the next morning. He had a lot of fun stories about work with astronauts and the variety of projects he has worked on.

Finally we get to Thursday – the day we set sail again. This was a very good day for me. Mostly because we were setting sail again, after being docked for so long in Nowhere, Louisiana. But also because I was successful in getting a song dedication to someone back at home and because Matt and I collected our first dolphin blows! Yup. As we were motoring out of Port Fo-sho, a couple dolphins started bowriding. Matt was just finishing up with a sediment sample he had collected. I grabbed a harness with a 6ft line, tied myself to the railing of the bowsprit and dangled myself about a foot above the dolphins. I was so excited I forgot the collection dish, which Dr. Wise brought to me. As I was dangling there, the dolphin continued to ride the bow without a care in the world, but seemed very curious about me. I can only imagine what must've gone through it's head. One second it's having fun, riding the bow of this boat. Next thing there's a human hanging just above the surface, apparently reaching for the dolphin. On top of that, the human then gets this circular thing from the top of the boat, and holds it above the dolphin's head. The dolphin comes up for a breath, and the human moves the circular thing above the dolphins blowhole. Then excitedly returns it to the top of the boat. Weird? The dolphin probably thought so...

Day 84 – Friday, October 8, 2010 – Groaning Day

Sandy woke me out of my slumber this morning to tell me we could hear whales, but Rainbow Click (our whale tracking software) wasn't working. Groggily I rushed up to the pilot house to take a look at the software and our system. All the settings on the software seemed good, though the brightness may have been a little low – but that didn't solve the problem. Also, all the settings on the hardware seemed good. So I closed everything and reopened it. That instantly told me what the problem was.

Our system is complicated. About a month ago when we first got it set up, I was lectured for about 2 hours to learn how everything worked and how everything interacted with each other. First we have the hydrophone array, which we drag through the water. That plugs into our array box, which we can amplify and filter the sound. These are the first two settings for giving us good sound. That box then connects to a MOTU amplifier, which has even more filtering and amplifying and connects to the computer. On the computer we use two types of software to visualize the sound, one to record the sound, and another to record our tracking progress. Both types of software have further settings to adjust the filter and quality of the sound, from what the first two boxes give us. If any of the filters are too low or too high, we won't hear the whales clicking. There is also a software that searches for the MOTU box. This is where the problem was – it couldn't find it. Thus, we weren't getting any sound.

Since the MOTU was apparently not communicating with the computer, I re-checked all the settings on the MOTU box, compared them to my notes, fiddled with a couple knobs and switches, and finally checked all the wires. Now, there's about 50 wires that connect everything, and most of them lead to the computer. The easiest place to check these wires is anywhere but behind the computer, so I saved that for last, hoping for an easy fix (I was still rubbing sleep out of my eyes). Nothing. So I had no choice but to look through the mess of wires behind the computer for any loosely connected wires. My first look showed nothing, so I got up on the table for a closer look. Everything seemed to be plugged in securely. So I checked the software again – still nothing. Then I checked the wires behind the MOTU – mostly to get an idea of what they looked like (if there was anything distinct about them), then I checked behind the computer again. Sifting through the wires, I found one wire that wasn't plugged in at all.

Now, I'm no computer genius – far from it. I also have a string of bad luck with computers (my last laptop died because I spilled tea on it). So, when I found this unplugged wire, I had no idea where it was supposed to go. It was shaped kinda funky, but I plugged it into the first slot I could find that it fit. Checked the software again – it worked! Turns out this was the Firewire cable that connects the MOTU to the computer, finally a little bit of good luck with computers!

The rest of the day was somewhat eventful in a bad way. We were having some technical difficulties with the engine, which caused us to stop every few hours. Then late in the afternoon, Capt Bob turned off the engine. Apparently the engine blew a hole in the radiator hose. Luckily, Capt Bob is also a very clever engineer and spent the

better part of the evening fixing the hose with what little supplies we had on board. Alas, this is also when we heard half a dozen whales on the array.

Since Matt and I were done with watches for a day, we collected any Sargassum weed that drifted by the boat – partly because we knew there would be krill, partly just to see what else there might be. So Matt and I collected another sample of krill (not as much as the first time), and started to perfect our method. Shouping came out to help us for a little bit, Monique was still on watch, and Jane was taking a break from everything because she wasn't feeling well (remember, this was her first day on big water). As the day faded away, it became more clear that we wouldn't be getting a chance to biopsy any whales today – that is, unless they swam over to us.

Dinner came around, and we all waited patiently for Capt Bob. It's a general rule that whoever is working last eats first. He grabbed his food and returned to work, letting us get our grub and continue with our evening. When I went to bed around 10pm we were still drifting. It's now 5am and we are moving again, but no whales on the array. Despite that disappointment, the night sky is phenomenal! No moon, no clouds, bright and uncountable number of stars! The water is also glass-like, allowing some of the stars to reflect off the water. I only wish I could get a photo to share it with everyone...

Day 85 – Saturday, October 9, 2010 – “I’m Turning into a FISH” Day

I had every intention of waking up again after my helm watch to take a recording or do a workout, but alas I slept too long. When I woke up Matt was headed up the mast. There were still no whales on the array. Everything was going normally. I studied until my watch. Shortly after we switched, I called Matt back on deck to collect some Sargassum weed – partly for krill, partly just to see what there was. We also wanted to figure out which method would be more effective – collecting Sargassum weed every time we see a large patch (at least the size of an SUV) or collecting several small patches as we sailed. The first time we collected Sargassum weed it was a very large patch – this time there were a lot of small patches. So Matt grabbed the “hand net”, a regular fishing net that has been duct taped to a 10-foot wooden pole (yet another use for duct tape!). Matt scooped the Sargassum weed, Shouping and Sandy picked out the krill, crabs, and other animals, while I directed Matt which side the next patch was going to be and directed Ian (who was on the helm) where to steer us. We did this for about a half hour before we thought we had enough. After awhile I realized the sea was calm enough for the crow's nest, so I climbed up to it until the end of my shift – it's a very peaceful place to be. Matt, Shouping, and Sandy continued to collect the small organisms out of the Sargassum weed for the remainder of my watch. When I came down they had finished and stored everything appropriately.

Monique and Shouping were on the next whale watch. Since I was in the crow's nest, I hadn't realized that Shouping was already in the mid-level platform, and Monique had been waiting for me to come down – oops! They spotted some larger patches

Sargassum weed. These larger patches usually have fish under them, so Matt and I prepared ourselves – Matt with the hand-net while I had the cast net. But Matt left before we reached the Sargassum weed!?!? I threw the cast net when it came up, and managed to catch a few of the larger fish, but the amount of Sargassum weed messed up the net. We made a couple more takes, and managed to catch some more fish. Then we all heard Shouping make some surprised noises. He said there were some larger fish swimming toward the boat – blue with yellow tails! Mahi mahi! Remember, Shouping is a quiet Chinese man that is still learning to speak English. We stopped moving altogether to catch some mahi.

Ian grabbed one pole, Bailey grabbed another, and Matt used the bait fish pole (much smaller and weaker line). We had collected a handful of fish for science already. Traditionally we keep three pieces of filet, three pieces of gill, and try to get samples of the brain, liver, and gonads (though these are usually harder). In addition, we agreed to save fin clippings for a researcher at Tulane. He plans to use these fin clippings for cloning research – so the clippings must be stored in alcohol after a fresh kill. While everyone continued to fish, I started to collect these fin clippings, preparing the dissecting lab for the samples, and keeping everything sorted by where we collected them. Ian landed two small mahi, which I tackled for some fin clippings. As I was collecting these fin clippings, Ian exclaimed there was a whale shark! I left the fish I was working on to check it out, but as I leaned over we all realized it was not actually a whale shark – it was a bait ball! A bait ball is a large school of very small bait fish that larger fish feed on. These bait balls resemble a cartoon version of a swarm of bees. So, I grabbed the cast net and tried to catch some for a sample. I found it very easy to get the net over the bait ball, and isolate a large group of them under the net, but they were so small that the fish swam through the net when I pulled it up. So I only caught a few with my first cast. Realizing this, I realized I would have to be much faster – which meant pretty much throwing the net on deck before most of the fish could escape – this method worked better, but it also meant the fish went everywhere on deck (on on everyone nearby). When we decided to start sailing again, I realized I had a lot of fish to process – most for science, but I was also told to save some filets for dinner.

A few hours later I was still processing the fish, and Matt was in the crow's nest. Towards the end of his 2h whale watch, I had three or four more fish to process and he radioed “dolphins coming toward us!” So I stopped what I was doing (removing scales from the next fish, a tripletail), grabbed a harness, the dishes, and a rope, and lowered myself over the side to collect some dolphin “snot” (as Ian later put it). Matt followed shortly after, and we were both hanging off the bowsprit again, trying to collect dolphin blows. Matt managed to get one sample, but I didn't get any. I think I was too low – the dolphins would be swimming under the water a foot below me, but would swim away for a breath, then return to the same spot under me. It makes sense I guess, if they had come up for a breath under me, they probably would've given me a kiss instead (that's how close I was!).

Matt and I ended the day in our traditional way – watching the sunset, looking for that elusive green flash. We positioned ourselves on the pilot house platform for this one,

binoculars in hand, using the railing to steady our arms. The sky was clear, the seas were calm, and there were no clouds in front of the sun! (clouds will block the green flash) The bottom of the sun touched the horizon, its reflection distorting its shape a little bit, and we watched in anticipation as it slowly dipped out of sight. The sun looked like a beautiful red circle as it sank. And just as it went below the horizon we saw the green flash! After 85 days of searching for it, we finally saw it!

By the way, I dubbed today the “I’m Turning Into a FISH” Day because the days I process lots of fish, I find that the smell sticks with me for the rest of the day (sometimes longer) and I find fish scales all over me throughout the next day or so.

Day 86 – Sunday, October 10, 2010 – Linda Greenlaw Day

I’m finding it difficult to write this log – partly because I don’t want to share the bad news, partly because I don’t want to think about it anymore. Simply put, we have more problems with our engine and are headed back into port – after two days at sea, perfect biopsying weather, and no whales seen we must return to land.

I have called this Linda Greenlaw day, because of a quote Dr. Wise just shared in his report for today...

“At some point in every trip, everyone reaches a stage of exhaustion unimaginable to anyone who has never quite been there. It is a state way beyond dead tired, a fatigue that goes all the way to the bitter end of each and every hair on your head.”

This quote comes from her new book, “The Hungry Ocean.” Linda Greenlaw was the female captain from *The Perfect Storm*, who was a good friend of the captain who perished in the storm (George Clooney’s character).

It was clear throughout the night that there was something wrong with the engine. I could tell we were drifting without getting out of my bunk based on how the boat was rocking. Also, throughout the night I could hear someone trying to get the engine started – revving it, but to no avail. I guess the generator was turned off at some point too, because my room got very warm – enough that I was aware of it and uncomfortable, but not enough to get up. This happens throughout the boat when the generator is off, because the AC gets turned off.

A few hours after I woke up, I overheard Dr. Wise and Capt Bob discussing the problem. The transmission was shot, and there was no easy way to fix it – we would have to go into port to get it fixed. The next concern was if we were going to be able to get to port – Capt Bob couldn’t get the engine started and there was no wind for the sails (and none predicted for almost a week). So we drifted while Capt Bob and Dr. Wise tried to figure things out.

Meanwhile, Shouping and I went fishing. Sandy had reported seeing a shark near the boat...when Ian went to check it out he saw a very large mahi mahi. There were also several smaller fish. Shouping and I put out one line for some small baitfish and another for the mahi. While I was tending to something else, Shouping started making some very excited noises and calling for me. He had hooked the mahi! He handed me the pole, because he didn't know what to do, then ran away to get his camera. I was a little stunned that he left so quickly. I reeled the fish in without much difficulty, and it was big and beautiful! Much bigger than any that we had caught previously! After I had the fish right next to the boat to bring in, Dr. Wise came on deck and grabbed the gaff, Shouping grabbed the net. Both stood on either side of me not knowing what to do. I backed up a couple steps to bring the fish in closer, but they still didn't know what to do. So I handed the rod to Dr. Wise and tried to bring in the fish by hand (i.e. pulling the line in by hand). But the fish was so heavy and the line was so thin, I couldn't get a grip on it. That's when Dr. Wise's phone fell out of his chest pocket and sank, and the line snapped with the hook still in the fish's mouth. It got away!

As it turns out the "shark" that Sandy saw was a remora – one of the suckerfish that is usually attached to whales or sharks. This fish was also interested in our bait, but never enough to bite the hook. After trying and trying I gave up on trying to catch it and focused on getting the mahi back – or catch some live bait. That's when Ian decided to throw in a couple pieces of bread to attract the bait fish. Instead, I saw the remora chomping all the bread pieces. Realizing this as an opportunity to catch it, I grabbed the hand net and made an attempt. I got it in the net! But I didn't realize it right away, and it escaped and swam away. That was the end of the fishing for the morning. I went back and forth throughout from my studying to fishing for the rest of the morning, until Capt Bob got the engine running again. We would not be stopping for anything (except maybe whales, but the array was already pulled in). The afternoon seemed like an eternity. We were two days at sea, and already had to turn back. We are docking in Biloxi again (the place with all the casinos). Monique and Jane will get off – not sure exactly who's getting on next.

I spent the afternoon catching jellyfish with the hand net as they floated past and finishing my studying. At the end of the day, Matt and I resumed our sunset watches, looking for the green flash. A tugboat went directly in front of the sun when it was half gone. Very picturesque. Then we saw the green flash again – two in a row!

Johnny