

## Johnny Wise's Reflections for Leg 4

**Days 42-50 – Friday-Saturday, August 27-September 4, 2010 – Docked in Bayou La Batre**

Upon arriving in Bayou La Batre, AL we all realized that we had fallen off the map. Bayou La Batre is a very small town that obviously depends heavily on fisheries as their main income – we are surrounded by shrimping boats that are docked due to all the fisheries being closed.

A few changes have occurred during these dock days... This stop became the end of Rob's and Juli's time on board with us – Rob wanted to stay longer in case we went back out to sea, but since there was too much uncertainty he felt it best to return home. Kyle also returned home, inspired by the trip to return to graduate school for film – he plans to write a screenplay about the voyage as part of his application.

We are sorry to see them leave, but are also excited to have our new crew members who will be replacing them. We have gained a new first mate, Ian Glass. He is a professional first mate and just got off a commercial boat a couple of weeks ago that was in the Gulf. Ian is an interesting character, as he is from Key West (like Capt Bob) and has done some work in the Mass-Maine area (like the rest of us). Sandy Wise (my mom) has also joined us to be the new cook. This will be her first time on the voyage, and she will be with us until the end of this trip. Carlyne Lacerte, another graduate student from our lab will be joining us today for this next leg. We have a person from the Scripps institute, Ethan, to help us fix our hydrophone and software. Ethan will stay with us until next Wednesday to make sure everything is working properly and we know how to use all the new hydrophone equipment. Scripps will also be sending a PR person to join us with Ethan, he will be arriving sometime today. Finally, another Ian will be joining us until Wednesday from Alexandra Cousteau's film crew (I will get to this later).

In addition to a change of crew, we have acquired some new equipment. We will now be collecting sediment samples – which Matt will be in charge of. I will be working with our underwater Remote Operator Vehicle (ROV), an underwater miniature submarine, to try to get some footage of the whales, dolphins, and other sea life underwater. We have an air sampler, which we will put somewhere up on the mast. Using this we will collect air samples for each leg (i.e. we turn it on at the beginning of the leg, and turn it off when we dock). Finally, we will be working on figuring out how to collect samples of whale and dolphin blows – to get a sample of what they may be exposed to through the air.

Shortly after we arrived, Matt and I were tasked with inventorying a few things – food, lab supplies, and medical supplies. This took us two days to complete, but before we finished that we were then told to do a few more places in the boat. Before we knew it, we were tasked with inventorying the whole boat. So, the first 4 or 5 days being docked in Bayou La Batre, inventory is all we did. Dr. Wise did rescue us a few times to give us a break from the boat, and brought us into Mobile, AL (about a half hour drive) for

dinner. Since we also only had leftovers from the last leg to eat, we were very happy to get freshly cooked food. At this point Matt and I have inventoried about 90% of the boat – all that's left is the pilot house and redoing the food (as much of it got eaten and more is being brought on board today). We saved the pilot house for last, because that's where Chris, Ethan, and Capt Bob were working for the most part, and have had a lot of boxes and equipment that is more than likely not going to remain there. We will complete our inventory when we're underway.

Also, this was the first week that Matt and I had our online courses. We have all the materials and access we need to be full time students while we're in the Gulf of Mexico. Our professors are very supportive of our research, and have agreed to work with us if we are unable to turn an assignment in on time due to bad weather – remember we are using a satellite to get our internet, and we lose reception similar to how you lose satellite tv reception in storms.

So that brings us to the last few days, during which we have been working with Alexandra Cousteau. Alexandra Cousteau (in case you don't know who she is) is the grand-daughter of Jaques Cousteau (pretty much the greatest rock star in the marine biology world). She has continued her grandfather's legacy, and is currently on an expedition with her film crew in North America to investigate global water issues. Hearing about our voyage, they connected with us and will be featuring us on their website and in their videos with National Geographic (I will let you know when this is released). Since Cathy (my sister) is a young female scientist and was the first to culture whale cells on the open ocean, and the first to culture humpback and fin whale cells, Cousteau's team paid for her to fly down to Alabama for an interview and some filming on the boat. We were very pleased to have Cathy back, and Cathy was very excited to be featured in their videos (and to have one more thing she could rub in my face). If I haven't mentioned this before...Cathy and I are like Mia Hamm and Michael Jordan in the Gatorade commercials from the 90s – "Anything you can do I can do better than you, I can do anything better than you. No you can't. Yes I can. No you can't. Yes I can!" We have been this way for as long as I can remember...

Cousteau's group spent 2 hours with us on Thursday, interviewing Cathy and Dr. Wise mostly. But also interviewed me for about 15 minutes, and had Cathy introduce Alexandra to the whole family on film (except James who is still at home keeping the stronghold in order). Friday evening, Cousteau's group came back for an official "Bus Meets Boat" event, where our two teams were able to meet and chat on a more personal note. I was very happy to get to talk with Alexandra Cousteau without a camera in our face (although there were still at least a dozen cameras around taking pictures of everything going on). Then again, this morning Cousteau's group came by to do another interview with Dr. Wise and myself. They talked to Dr. Wise some more about the voyage and the science, then they talked to me about the biopsy process and a more personal impact the voyage has had on me. One of their camera guys will be joining us for a few days (and hopefully get some good footage of us biopsying whales). He seems like a really fun guy, and will be bunking with me.

Unfortunately Cathy's flight was cancelled on Friday due to some mechanical issues. She came back to us, very upset that she would miss her game and that she had missed the boat meets bus event. Matt and I made sure to cheer her up with a few hours of that crazy game of Quelf. If you haven't heard of Quelf, it is a hilarious game that works out like this:

There is a board with 5 different colored spaces repeating in a spiral around the board, a die, a timer, 5 stacks of cards (for each color), and game pieces. The way the game works is you roll the die, move that number of spaces, draw the color card that you land on, and do what the card says...

Blue = Rulez Card – There are Talking, Action, and Global rules. Talking Rulez (e.g. you have to talk like a scurvy pirate at sea) and Action Rulez (e.g. every time someone walks within 15ft of the game board, you have to bark at them like an angry dog) apply to the person who drew the card, Global Rulez (e.g. every time someone rolls the dice and lands on the same space as someone else, those two must do a western quick draw, and say "This town ain't big enough for the both of us." Loser pays the penalty) apply to everyone.

Red = Scatterbrainz – This card has a 'This' or 'That,' the person who drew the card chooses one of the subjects and you have to go around the circle naming something that fits the topic (e.g. Places you've been naked. Or common allergies that a human might have that a naked chinchilla floating in space orbiting the Earth wouldn't have').

Purple = Showbiz - This card could be timed and/or classified. The person who draws this card will end up singing, dancing, miming, drawing, or something similar (e.g. Drop to one knee and sing a verse of a love song to this card).

Green = Quizzle – These cards are full of wacky trivia, riddles, and brain teasers. e.g. Which of the following foods are toxic to parrots? Chocolate, carrots, avocado, strawberries, or pickles. Bonus: If you can take a bite of any two of these items listed in the question, and chew them up at the same time, you may double your next dice roll – I ended up eating dark chocolate and pickles at the same time (it's all we had from the list).

Yellow = Stuntz - These include balancing acts, making costumes, daredevil moves, and funky contraptions. e.g. show your opponents your belly button. Pretend your belly button is a mouth, and talk with it in a scary old voice. Make your belly button say, "I've seen a lot of strange things in my day, but this just beats all."

In sum, this game is for people who don't mind or enjoy making fools of themselves. There is always raucous laughter whenever we play – both from the players and from any spectators (some people have been too afraid to play with us). Cameras are almost always within arm's reach for these crazy stunts that we do. It has become mine, Cathy's and Matt's favorite game to play.

Later today we will return to the ocean. Matt and I will celebrate this with our bottles of Moxie (a soda from Maine) that my mom brought us, along with whoopee pies (also a Maine thing). We cannot wait to set sail again with our new crew and equipment!

I have also attached a picture of me with Alexandra Cousteau (my Aunt Cathy says I look like I'm in love).

Here is Cousteau's website: <http://www.alexandracousteau.org/field/expedition-blog/whale-researchers-investigate-dna-damaging-properties-dispersants-and-pahs-cru>

Now we really need EVERYONE wishing us whales!

### **Day 51 – September 5, 2010 – HARP Day**

We have a slightly different and new routine for this leg (and probably the rest of the voyage). After a boat meeting before departing from Bayou La Batre last night, the students have been assigned 2-hr night helm watches accompanied by a crew member. As a result, morning shifts for whale watches have been fixed (thus fixing watches for the whole day). On one hand, I'm glad of this – I can easily plan study and work hours for each day/week like I usually do at home. On the other hand, I have to adjust to a 4am-6am helm watch every day. Since I am taking recordings on the hydrophone we acquired from Dr. Mann some weeks ago before sunrise, it just makes sense that I ought to take a helm watch at that time. Then my first whale watch is at 7am. Sandy has the 8pm-10pm shift, Matt is on 10-12, Dr. Wise 12-2, and Carolyne 2am-4am.

The first job of the day was to haul a HARP buoy that belongs to Scripps, so that Ethan could service the buoy. Essentially, he was replacing the batteries and memory cards in the buoy. The buoy was located within 10 mi of where the Deepwater Horizon was, and was deployed within a couple weeks of the explosion to collect acoustic data. I can't remember what HARP stands for – Hydro-something Acoustic Recording(?)...nope, it's gone. We managed to pull the HARP in just before noon, in some pouring rain (which of course stopped when we were done).

Around 2pm we set up the whale boom, had the easiest time of it so far. Once that was completed Matt and I explained to Carolyne and Ian (Cousteau's cameraman) how to climb up to the mid-level and crow's nest. Ian plans to take some video from those spots, and Carolyne is joining Matt and I there for whale watches. Since we started so late, we each only had two watches, which was enough to get into a groove. During our last watch, Carolyne told me she was feeling a little nauseous. About 15 min later, she very politely told me she was going to puke, did so in her bag, and apologized afterwards. I was stunned by the fact that her voice sounded the same before and after puking – I thought she was strangely cheerful about it. A few minutes before the end of our shift, I told her to start heading down. When she was almost at the bottom I heard her puke again – and again very cheerfully talking about it with the few unfortunate people who saw the whole thing. I didn't mind, because it meant I had a legitimate

excuse not to climb down yet, and continue watching the sunset. I had gotten myself in a very relaxed and comfortable position on the crossbeam – back against the mid-level platform and legs extended on the crossbeam. I wasn't the only one enjoying the sunset – Dr. Wise, Matt, Rick, Sandy, and a few others were standing on the starboard watching the sun set. It was a very beautiful sunset, and I'm finding it hard to believe that there is such a thing as an unpleasant sunset at sea. Ian (cameraman) had also brought his video camera out, and was filming everyone watching the sunset, and a few other things that were going on. He is very pleased to be off the bus and on the voyage with us – as we are very pleased to have him.

## **Day 52 – September 6, 2010 – Whales on Camera Day**

The day started early for me – up at 4am again for my joint helm watch with Rick, and taking a recording on the hydrophone on loan from Dr. Mann. Hopefully my body will adjust to this schedule sooner than later... We were within 10 miles of where the Deepwater Horizon was, drifting, as this is where we would release the HARP buoy that we retrieved yesterday. The area is lit up like a city! Just before sunrise, Matt was on deck ready to start his watch, but we both agreed it was too dark to see anything and would be for awhile. Shortly after sunrise, Dr. Wise came on deck and told us we were wrong – that Matt should've climbed up anyway. He then told us to forget about it and collect a water sample – he thought it would be scientifically interesting to collect a water sample within visible range on the Deepwater Horizon sight. A few months ago, the area we were drifting in would've been covered in crude oil – we didn't see any. This sounds like a good thing, but we know that that much oil doesn't just disappear that easily. As we were taking the water sample, I realized that there was a dead flying fish at my feet. Dr. Wise was rather excited about it, and told Matt to process it for analyzing after we were done.

Before I knew it, it was time for my first whale watch shift while Matt processed a flying fish. While I was up there, the entire team gathered to watch the release of the HARP – I remained on watch. After my second watch (I'm skipping ahead here), Ethan (from Scrips) gave me my first lessons in all the acoustic equipment he and Chris had installed while we were at Bayou La Batre. The lessons lasted for an hour, we took a break for lunch, and another hour of lessons after lunch. When we were done, I resumed watches around 1:30pm. Rick joined me to keep me company for the first half hour, then climbed down to switch with Matt. As he was climbing down, I asked for a status update on any clicks on the array – there were some! Then Ethan told me he was successfully tracking them, and they were right in front of the boat! I scanned ahead, and within 30 seconds I saw the first blow! The amount of excitement and relief I had at having a working array was enough to send me to the moon and back (if rockets were fueled with excitement). And so, we went through our regular routine for biopsying whales – though with a few adjustments.

Chris brought me a GoPro video camera that I could wear on my head when biopsying whales – which I donned and started recording before clambering out to the whale boom. Ian (cameraman) was climbing around on the forward deck and above the main salon, searching for the best shot of the team, and of individual people. Rick was on the bowsprit, Jill had the data log, Carolyn had the camera, Matt was prepping arrows, Ethan had the net, Ian (first mate) went up the mast, Sandy was on lookout on the pilot house, Dr. Wise was standing in the pilot house door barking instructions, and Capt Bob was on the helm. The seas were much rougher than the last time I was on the whale boom. So much rougher that I almost fell off a couple of times, and I was dunked up to my waist (while still sitting on the chair) 4 or 5 times. When we came up on the first whale (two had been spotted separately), Rick made his first attempt prematurely – the whale did a shallow dive and swam away. It dove just out of range when we spotted it again. So we set our sights on the second whale. This time we had two takes. The first one, Rick made an attempt just before me and we both missed – I had forgotten to factor in the wind, Rick must've done the same. Both arrows fell short within a couple of feet of each other. The second attempt, Rick overshot and I hit the whale right on the mark. We turned to retrieve the arrows, lost track of a few and spent the next hour or so looking for them – usually we are able to retrieve the arrows within twenty minutes of turning. I don't know what the confusion was, but it was very frustrating. By the time we collected all the arrows, the whales were out of sight and not clicking on our array. We resumed watches. Also, the biopsy that we thought I had acquired turned out to be empty. The arrow did in fact hit the whale, but the whale's skin is so thick that it bounced off harmlessly. We got some great footage of the whole spectacle from a camera strapped to my forehead (a very cool perspective for those who haven't seen it), as well as on Ian's (cameraman) video camera.

Though we were frustrated not to have a biopsy, it feels like a very successful day. I think Matt and I feel it more than anyone else, as we have done between 400-500 hours of watch from the mid-level platform since we left Portland a month and a half ago. By the end of this voyage we will have likely surpassed 1,000 hours in the mid-level platform. Now that is about to get a LOT easier, as we have a working array, much thanks to Ethan!!!

### **Day 53 – September 7, 2010 – Really Hot Day**

No whales sighted today. We did hear them a couple of times on the array, but lost them before anything was sighted.

Today was a VERY hot day. Hot enough to the point that 2 hour shifts were practically unbearable. Matt was sick early in the day, I assume a combination of the heat and a lack of sleep. That left Carolyn and I swapping places in the mid-level platform. This worried me, as Carolyn is still new to the boat and was still sick yesterday. However, she proved my doubts wrong and every two hours climbed up to give me a break. We were both miserably hot. It's a heat that slows time immensely and cooks the top of your head to the point that you feel like you can fry some eggs on it – or your brains for

that matter. There was also no shade. During the middle of the day on the mid-level (i.e. between 9am and 4pm) there is no shade, because the sun is pretty much directly overhead. When the sun is lower, it's possible to get some shade from the mast – if we are headed in the right direction. I have to laugh at myself about using this shade, because of some birds Kellie and I saw way back in Beaufort, North Carolina. Allow me to digress...

When I dropped Kellie off to do laundry in Beaufort, we noticed some sea birds standing in the shadow of a street light. We had a good laugh about it, because there were 6 or 7 of the birds lined up in this narrow shadow – granted, it was 104 degrees. These days when I'm on watch on the mid-level, I often find myself standing in the narrow shadow of the main mast, trying to avoid the sun. It started subconsciously, I guess – I would occasionally realize that I was standing in the shadow and had been for awhile. Now, I often seek the shadow. Though it doesn't make much of a difference if you go back and forth between shadow and sun; it makes a huge difference if you're standing in the sun for two hours versus standing in a narrow shade for two hours. I guess this goes to show that nature is our best teacher.

Ian (cameraman) took several shots of boat life throughout the day – the ones I noticed were when he mounted a camera onto the pilot house platform facing the bow, he climbed up to the mid-level when I was on watch and took some of me searching for whales, and took a couple shot of me climbing up to the mid-level. If he took others, I was unaware. I spent the entire day either looking for whales in the mid-level or in my room watching lectures for class. Every time I came down from the mid-level I felt like I was on the brink of heat sickness (overexposure to sun, which can lead to heat stroke). So, sitting in my room with the AC cranked watching lectures was much more preferable to anything else that I could do.

The day ended with a game of Quelf – myself, both Ians, Ethan, and Mario played (Matt had gone to bed earlier). Here are some of the highlights from the game:

Mario had to do a beat box for 30sec

Ethan had to sing and dance his favorite disco song

I had to say, "You talking to me?" in my best gangster voice any time someone asked me a question

Ian (first mate) had to do an Irish jig while singing "The Wheels on the Bus"

Ian (cameraman) had to act out a boomerang for 50 ft, saying "wah wah wah wah..." and each player could ask him to repeat it once

Ethan had to act out someone wearing fins and a snorkel being stung by bees

Any time two people made eye contact, they had to say "Trippy"

And so on...

## **Day 54 – September 8, 2010 – Drop Off Day**

We headed up the Mississippi River last night to Venice, Louisiana. This was the nearest place where we could drop off Ian (cameraman), Mario, and Ethan – as their time had come to an end with us.

Ian has been bunking with me the last few days, and has been great company to have on the boat. Very interesting perspective of the world, and a great sense of humor. Apparently he had it in his mind to say farewell to me by waking me up with a wet willie. If you don't know what this is, it's when you wet your finger (usually with saliva) and stick it in someone's ear. My family has a tradition of doing these, and when my dad heard about Ian's plan, he couldn't help but laugh and told him to do it. Instead, Ian woke me up politely and shook my hand as a farewell.

Jill also decided to get off the boat, as she decided it was more important to return home to finish some classes this fall so she can graduate next spring. So, 4 got off and none got on – leaving us with 8 people on the boat. This is the smallest number we've had since we started – and it feels like a lot smaller, because we just had a full boat.

Rick and Sandy also got off the boat for the afternoon to get more provisions. When they got to the dock, they found out there was no grocery store within 30mi of where they were – which turned out to actually be 50mi. One of the guys working at the dock loaned them his truck so they could make the trip. We've learned these last few weeks that southern hospitality is truly remarkable. When Sandy and Rick came back, the guy who loaned them his truck told them that if they see his truck in the parking lot, they're free to use it (he leaves the keys in the car). It doesn't come as a huge surprise that he's not concerned about auto theft – we are in the middle of the bayou – but it is impressive that he would tell this to Rick and Sandy and give them permission to take the truck whenever.

Meanwhile, Matt, Carolyne, Dr. Wise and I spent the afternoon rearranging and reorganizing the salon (our living room) to be more comfortable and to feel less crowded. Capt Bob and Ian (first mate) slept for most of the afternoon, as they had had a late night bringing the boat up the river.

During dinner at the end of the day, we couldn't help but notice how much quieter the boat seemed. I'm sure it's partly due to the drop in people and the rearrangement of clutter, but it's a quiet and relaxed feeling that we haven't had on the boat since we started. I expect this next leg will go much easier than any other.

## Day 55 – Thursday, September 9, 2010 – Rock Around the Clock Day

Wow! What a day!

My day started at 4am, helm watch with Capt Bob. Around 5am the hydrophone was verbally attacked by a pod of dolphins. The dolphins followed the array for the next hour, clicking and whistling the entire time – also blocking any chance of hearing whales on the array. It was very interesting to listen to the dolphins on the array and watch the change in pitch and frequency of their clicks and whistles – it was almost as if I was able to listen to a wide range of their language (or a large number of different voices). I was very excited to record it all, and hopefully get some on the hydrophone for Dr. Mann.

Between my helm watch and first whale watch I spent my hour wrapping up some loose ends – logs, classes, emails, etc. I had had a lot of distractions the last few days and wanted to wrap it up. The entire morning had a promising feel to it that it would be a busy and successful day, for no reason whatsoever – except maybe because Ian (cameraman) had just departed, and because we were short handed. Whatever it was, it was rewarding and punishing at the same time.

Shortly after I was up in the crow's nest, Capt Bob announced there were clicks on the array – and the first person to find a whale blow would get a piece of chocolate. Rick also threw in a large Hershey's chocolate bar. Next thing I knew, everyone was on deck looking for whales – including Capt Bob and Rick. Within ten minutes, there was a minor dispute as to who had spotted the first whale blow – myself or Matt. Ian settled the dispute by saying we could split it. Matt and I were content with this conclusion, as we are accustomed to sharing food and drinks.

What happened next is very much a blur...we were on whales, and it seems like we never came off of whales. When we're "on whales" it means we can see whales and are getting the boat in position for a biopsy – whether that means we're sailing to a whale a couple miles away or realigning with a whale ten or twenty yards off the bow. We were on whales until lunch, and had successfully biopsied 5 whales and had a few misses. At one point we encountered a mother and juvenile – such a pair is a very important piece of data regarding our research, so we put our best effort to biopsying both. We biopsied the mother first approach and first try – the juvenile we had to follow longer in order to get a biopsy, but did eventually get it.

Lunch time happened in a funky way. We didn't plan on it. What happened is someone spotted something they thought was a whale – we went for it. As we got closer we realized it wasn't moving. Then the questions arose...Is it a dead animal?

.....No.....What is it? ..... I dunno.....Is it plastic?..... Ya, it's some kind of garbage... Turns out it was a large piece of plastic that was floating in the middle of the Gulf. We pulled up alongside it to retrieve it (we occasionally pick up large floating trash). When Capt Bob grabbed it with the gaff (a long pole with a big hook on the end), he and I noticed a bunch of small fish underneath. We figured, 'What the heck?' I grabbed the net and proceeded to try and catch a fish. No one else seemed to think I

would catch one, as they continued looking for whales – then I caught one, a tripletail (which are really good eating). The fish was a little bigger than my hand. I proceeded to quickly kill it, as we would use it as a fish sample. Matt got a bucket of salt water and put the dying fish in. I went back to fishing. At this point, Ian (who was on the mid-level) spotted a school of mahi mahi – very large and brightly colored fish, also I'm told very tasty. So Matt went on the bowsprit with a rod to catch a mahi mahi. Meanwhile, Dr. Wise switch with Capt Bob as I caught a bunch more fish – 3 triggerfish, 2 lesser amberjack, and 1 tripletail in all. Capt Bob joined Matt in fishing for mahi mahi – both were unsuccessful in catching a mahi mahi, but did manage to catch some lesser amberjack (wrong bait/luer for mahi mahi). After awhile everyone went back in for lunch. With Ian's help, I set out to catch a mahi mahi – only I used live bait. Ian tied an appropriate knot and hook through the dorsal of one of my trigger fish. So, while everyone was sitting in the cool salon eating lunch, I was sitting on the bowsprit waiting for the mahi mahi to return (they had been circling us, probably hunting the small fish under our hull). Sure enough they came by. A big fish took one look at my bait, and bit hard. Immediately I started screaming at the top of my lungs "Fish on! Fish on!" Ian was the first to hear me, and came on the bow deck to help me (there are some lines that are difficult to get around alone). And the fish was zigging and sagging everywhere, jumping 6ft out of the water and putting on quite the spectacle. He was quickly followed by everyone else, not sure if they believed I had actually caught a fish. I reeled it in right next to the boat, Rick had the net ready for me but was struggling to get the fish in the net (the net was also too small for the fish). Ian tried pulling it in by the line, but when he had it fully out of the water, the line snapped and the fish was gone. My bait was gone, so I took another small fish out for bait, and Ian tied another hook and leader. I went back to the bowsprit, and everyone else went back to lunch.

And again, I hooked a fish! But it spat out the hook before I could set it and reel it in. This happened another 4 or 5 times before I was able to land one – though smaller than the first. I was excited to have landed my first mahi mahi (with some help), but disappointed that it was smaller than the first. Dr. Wise reminded us that we were supposed to be looking for whales, when Matt realized we hadn't taken a water sample for the whale biopsies yet. Matt suggested I continue fishing while he and Carlyne took a water sample. So, after a photo op I went back to the bowsprit, stubborn as a little kid and determined to catch a big one – not that the one I caught was a small fish, it was about 10lbs and the length of my arm. Matt and Carlyne went to take a water sample, Sandy grabbed a video camera to watch me. Again, I got several bites before I hooked another fish. This time it was bigger than the first and put up a good fight – but so did I after getting some tips from Capt Bob and Ian. As we were pulling the fish in, the line broke and I thought we lost it – but Rick had caught it in the net at the last second! We brought the fish on board and Capt Bob whacked it's head to kill it quickly. This one was about 15-20lbs and the length of my torso. After this I was satisfied and went to have my lunch.

After two bites of my sandwich, someone announced a whale blow. I wolfed down my sandwich, and went back to the bowsprit. We repeated the morning. Whales, whales, whales. At one point we were trying to figure out which group of whales to go for –

several groups had been spotted. Enough groups, that Ian said something along the lines of, "Where do you wanna go? There's whales all around the clock, in every direction." We decided on the nearest ones.

After following a group of whales for awhile, and having a handful of arrows in the water – some with biopsies, some without, we decided to turn around and find the arrows. This is when we realized we had a dilemma. We mark the arrows we don't pick up with a life ring – they're easier to see, but they drift faster than the arrows (as the wind blows them and not the arrows). There were supposed to be two rings in the water and two arrows next to each (four arrows total). At the first ring we found one arrow, but not the other. So Capt Bob sailed upwind, did some triangulation with wind and current directions, while the rest of us searched and searched and searched. We had been on whales for at least 7 hours at this point, and hadn't gotten much of a break. As the time passed and we didn't find the other arrow, we were beginning to get restless. Enough that I abandoned my biopsy post and climbed up to the crow's nest for a better vantage point, and Matt climbed up to the mid-level. After being in the crow's nest for a half hour, I climbed down. I felt too weak to stay up and decided I needed food, water, and to cool off – I hadn't been eating much all day and had been under the hot sun most of the day (but I had been drinking plenty). After I got down it was realized that the missing arrow was already in – Matt had picked it up so quick after the biopsy that we didn't need to mark it, but Sandy (data recorder) didn't know this so there was some missing communication – lesson learned. We went to the next ring, and retrieved the other two arrows without incident, and returned to whales.

Towards the end of the day, we had 10 biopsies, bringing our voyage total to 24. Dr. Wise wanted one more, so he joined myself, Rick, Sandy, and Carlyne (photo id person) on the bowsprit to find whales. There was a classic student-professor moment when I told Dr. Wise to look aft for whales (as he always wants people to be looking all directions). After we got our 25th biopsy, I still wanted another biopsy – so we continued looking. Dr. Wise was in mid sentence telling me to look aft, when I announced 'whale blow!' and pointed to 7 o'clock (aft). I did not get my last biopsy of the day, but wasn't too upset as it had been a VERY successful day – tons of whales and a bunch of fish (including my first mahi mahi!).

We all ate dinner at the aft table (as is our new tradition) just after sunset. Everyone was wrecked, but light-hearted and we shared a bunch of laughs as we reflected on the day's events. After dinner, we all set to do our end-of-the-day tasks. Only tonight I had a bunch of fish samples to process, and two mahi mahis to filet. These took me about 2 hours. The mahi we wanted to eat and save samples for research – so I filleted the fish and saved some of the meal, the liver, ovaries, and gills for research. The two mahi were so mutilated that they were beyond recognition. I finally got to bed around 12am (after being up and active since 4am) and fell right asleep.

**Day 56 – Friday, September 10, 2010 – De Ja Vu day**

Today felt like a continuation of yesterday. I woke up at 4am for my watch, and asked Ian if he needed me or if I could go back to bed. He could tell I was hurting for sleep, and sent me back to my dreams (which were about whale blows and open ocean all night). At 7am I woke up again for breakfast. I was halfway through my glass of orange juice when the call for whales arrived – I hadn't even been awake for 5 minutes! So I gulped the last bit of orange juice, gathered my stuff and made my way to the bowsprit. Rick joined me shortly after, Sandy after him, and Carolyn after her. Matt (who spotted the whales) climbed down and was replaced by Ian, Capt Bob got on the helm, and Dr. Wise was rolling out of bed in the lab. Most of us were still rubbing the sleep out of our eyes when we saw the whales – but they dove before we could get to them. Time to search again. And there were more – lots more. In fact, the morning generally went like this: whales spotted, we head towards them, they dive far away, whales spotted again (within a minute of the last ones diving), they dove, new whales! And eventually we pulled alongside a group, and had our first biopsy of the day at 7:45am.

By 8:30am we had taken 4 biopsies, then got a short break. We were headed toward whales, but they were a couple miles away. I took this time to grab the GoPro camera (a small HD camera that I can mount onto my forehead with a headstrap) – this gives us a really cool perspective of the biopsy process, and since both Rick and I were on the bowsprit I've got some good footage of Rick taking biopsies as well.

By 9:30am we had 8 biopsies. We had encountered a handful of juveniles with their mothers, and focused our efforts on them when we could. There was one pair that stuck out in particular – the mother did a shallow dive, swam across our bow and the juvenile followed. The mother dipped out of sight, but we could still see the juvenile, which appeared to be bow-riding like dolphins often do (but I assume this is not what it had in mind, it just happened to be in front of us). The water was SPECTACULAR today – VERY blue, VERY calm, and VERY clear. Rick, Sandy, Carolyn and I were dumbstruck with awe when we saw the whales shallow dive – and we could still see them 20ft below the surface (and below the hull). It's almost disorienting seeing the whales like that – they looked like they were flying below us!

By noon we had 18 biopsies! The last group we had biopsied was a group of ten whales (including two juveniles). This group was a gold mine for Rick and I – they were all lined up like logs next to each other. We approached them two separate times, and got 5 biopsies between both approaches. The first approach we biopsied the closest two whales. I quickly cocked my crossbow, reloaded (Sandy was ready with an arrow at arm's length for me), and biopsied a second whale just as it was diving. Rick was right behind me with his second attempt, but was half a second too late and all the whales were underwater. We knew we had three biopsies, and elected to return to pick them up – we learned a hard lesson yesterday about getting carried away with biopsying, and we knew the whales weren't going far. We quickly retrieved the arrows and life rings. This time, Dr. Wise and Matt had been in the lab all morning and were too busy to do anything else. Rick and Ian looked for the rings and arrows, Sandy kept a strict data collection, Carolyn retrieved the arrows, I retrieved the rings. Then back to the whales (which were sighted just before we retrieved everything). We approached

again, and found the whales to be lined up in the same order we left them, making it easy to figure out which whales we hadn't already biopsied. We can distinguish different whales by scratches, white marks, and nicks along their bodies and dorsal fins – sometimes their flukes, but the flukes are usually harder to focus on when the whales are moving. Two more biopsies (totaling 18 today) and the whales shallow dove, we turned around to pick up the arrows and ring. As we were pulling in the last arrow, Dr. Wise asked Capt Bob if we had spotted any more whales – we hadn't, so Dr. Wise called us all in for lunch. We were reluctant, but knew we would need it if the pace was going to continue – and it seemed likely.

After lunch Matt and I collected a water sample. The deck was HOT. I dumped some sea water on the deck to cool it off, but it was hot and dry again within 10 minutes. So I dumped more water on with a bucket, and kept the deck wet until I was done collecting water samples – Matt was labeling the bottles and filtering some of the samples.

Around 1:30pm we returned to our watch schedule, but no more whales were spotted for the rest of the day. And none were heard. During my watch, I spotted a few interesting things – a floating treasure chest and a patch of Sargasso seaweed mixed with crude oil. Unfortunately I didn't spot the treasure chest in time for us to pick it up, and we weren't going to return to pick it up. The crude oil patch was about the size of 10 parking spaces – seemed large to me, but quickly realized how small it was when I thought about how big it would have been two months ago. When I spotted the oil slick, pretty much everyone was asleep or drowsy. So, there wasn't any reaction when I reported it until I asked someone to write down the GPS coordinates. Looking back on it now, I wish we had collected a sample.

On a final note, I'd like to point out that Carlyne has been trained in the lab. Thus, if we have a day like today (or yesterday) they can switch with Dr. Wise and Matt – as the sun gets too much for us when we're outside all day collecting samples. I believe everyone is sunburnt (except Dr. Wise and Matt who were in the lab all day). Also, Carlyne and Sandy took over in the lab in the afternoon. We had a lot of samples, and it was simply too much for one person to keep up with – I think they finished the biopsies from the morning around 6pm.

## **Day 57 – Saturday, September 11, 2010 – Catch Up Day**

No whales today. But that didn't keep us from being busy all day. Matt and I spent the day catching up on classwork that we were unable to do for the last two days. Matt apparently missed a quiz, but was given an extended deadline due to the circumstances. We changed our watches from 2 hours up, 1 hour down with two people on watch at all times to two hours up, four hours down with one person on watch. We realize that, with the array working, we don't need as many people on watch. When we hear a whale, we point the boat in the direction from where the sound

is coming from, and the person on watch has a lot less area to search. All the time I was not looking for whales I spent watching lectures online.

Late in the afternoon we heard our first whale. Towards the end of my shift I spotted it two or three miles away – a tough distance to cover before it dives. Nonetheless, we sped up to it – but it dove about a half mile away. We all remained on deck until it surfaced again (except Matt who was taking his quiz). This time Carolyn spotted it – again about two miles away. We rushed over to it, but it dove again about a half mile away. It was 6:30pm by this time, and we were starting to lose hope in finding the whale before sunset.

I returned to my studies right after the whale dove, figuring I had at least half an hour before it would resurface. It was during this time that my Grandma Katie and Aunt Cathy logged on to skype and gave me a call to say hi. We exchanged silly jokes and talked about life in Grandma's new apartment and my life on the boat. She was very proud of me for catching enough fish to feed the entire crew. Shortly after we said goodbye, I started smelling that mahi mahi cooking in the galley. I followed my nose out to it, hoping for a meal when I was told by Dr. Wise to go relieve Carolyn. A little disappointed about having to leave the delicious smell, I hollered to Carolyn to climb down so I could relieve her, but she refused. She claimed it was silly for her to climb down and me to climb up for the last twenty minutes of the day – what if we missed the whale! So she stayed on the mid-level platform and I looked for the whale from the bowsprit. There was no getting her down until we had a biopsy of that whale!

After searching and searching, then watching the sun go down, and some more searching, Capt Bob announced he saw the green flash that Matt and I have been trying to see since we boarded – we missed it!!! Then after some more searching, Carolyn gave the call for the whale blow – about a mile behind us and swimming toward us! Capt Bob quickly turned the boat around and pushed the engine as fast as it could go – he obviously wanted to get a biopsy of this whale. Everyone else came on deck and got in position. Ian took Carolyn's usual job with the camera, Rick was behind me on the bowsprit, Matt took Sandy's job logging data, Dr. Wise was standing on deck behind them, and Sandy was in the galley finishing dinner preparations. We pulled up to the whale and were in position just in time – the whale started to dive, and I got the biopsy as the last bit of daylight was fading away. Not wanting to lose the arrow, Dr. Wise grabbed the net and tried to scoop up the arrow, but it was too far away. Capt Bob tossed a life ring and turned the boat hard to port. There was the arrow, and the ring a little further out. I was standing outside the boat, gaff in one hand, holding onto the railing with the other, stretching to reach it. Before it got to me, I realized I wasn't going to reach it and told Matt to hold onto me. He hugged my waist, I lunged, but no success – the ring would have to wait. Meanwhile, Dr. Wise had the net ready but missed the arrow, hustled back a couple more feet tried again and missed again, hustled back a few more feet tried again and missed again – Capt Bob was leaning over the side ready to pick it up with his toes, when Dr. Wise scooped up the net inches in front of Capt Bob's toes. Dr. Wise was clearly eager to bring in the biopsy. I took the arrow out, handed it to Matt and he started processing it. Then we turned again, picked up the

ring, and as they say, 'all is well that ends well.' Dr. Wise said that was his favorite biopsy of the trip – as it was very suspenseful for us whether we would get the biopsy or not.

We all waited for Matt to finish processing the biopsy before we ate dinner – Matt was first, I was second (partly for reward, partly just because we usually are the first two in line for food). We ate a delicious meal of the mahi mahi I caught the other day (which was caught very west of the Deepwater Horizon, and in an open fishery). We ended the day talking about nothing in particular and watching satellites and shooting stars dart across the clear, starry night sky.

### **Day 58 – Sunday, September 12, 2010 – Swim Day**

Very quiet day today on the Gulf. Hardly any animals, boats, and oil rigs were seen, no whales were heard. Matt and I spent the majority of our day finishing up classwork for this week's deadlines while we weren't on watch.

Capt Bob and Rick set up an extra sail canvas to cover the aft deck, protecting it from the hot sun. We were very pleased to have this installed.

During my afternoon watch, I accidentally dropped an empty bag of chips into the ocean as I was pulling an apple out of my bag. Capt Bob saw this, asked if I wanted to retrieve it, then made the boat do a quick 180 before I could respond. This sudden motion brought everyone on deck wondering why we were turning, expecting anything but picking up a chip bag. I was a little embarrassed...

A little while later I spotted a baby turtle swimming away from the boat. It must have been no bigger than one of my hands – an exciting break in the nothingness that I had been seeing the rest of the time.

About an hour before sunset we stopped the boat for a swim. Everyone got it. Crystal clear water, very warm and very salty. Matt and I decided to do a synchronized jump off the bowsprit while I wore the GOPRO camera on my head. I was terrified to find that the camera had fallen off my head when I came back to the surface – and it wasn't floating. I quickly dove and found it neutrally buoyant (I think) about 7ft under the surface – phew! I was very scared that I had lost it to the depths of the ocean, as I had only just acquired it the last time we were docked. Should make for a rather interesting video...

After our swim the entire crew sat on the bowsprit watching the sunset – frozen bananas in hand. All had joined in the feast with the monkey brethren! We were hoping to view the green flash at sunset – the skies were clear and it seemed like the perfect evening for it. Unfortunately there was one large cloud right in front of the sun where it was setting – thus blocking any chance of seeing the green flash (which apparently isn't anything like what one sees in Pirates of the Caribbean). Everywhere else we looked

there were no clouds on the horizon (and Matt and I were looking with binoculars). I guess I will have to continue my search for the green flash.

The day ended with a game of Quelf – myself, Matt, Ian, Carlyne, and Sandy. We all enjoyed it, got some good videos, and I have gone through all of the cards except for a few blue ones that are left (which is my aim). Dr. Wise and Capt Bob are reluctant to join us, but we are still hopeful!

## **Day 59 – Monday, September 13, 2010 – Last Minute Day**

Today was pretty much like the last two – no whales. At least it seemed it was going to be that way until after Carlyne relieved me in the mid-level platform – whales started faintly clicking, and she spotted one! Or was it two? At the time it was difficult to say, but as we got closer we realized it was one HUGE male – the biggest we've seen yet! We biopsied the whale just as it started diving. By 7pm we had three more samples and on our way to our last whale of the day – the sun had already set and light was fading fast.

The girls (Carlyne and Sandy) were unsure about whether we would have enough time to get the biopsy and retrieve the arrow. The guys weren't abandoning their post. I told Sandy to grab a flashlight, as we would likely be needing it to find the arrows.

This last whale was particularly interesting. While we were collecting the arrow from the last biopsy, it had been slapping its tail on the surface, slapping it every 30 seconds for about 20 minutes! I understand that this is called "lobtailing" – and while the purpose of this is not completely understood, it's believed to be a tactic to ward off killer whales. There were no killer whales around, so either it was practicing or it was having a lot of fun (what would you do for fun if you lived in the ocean and had a huge tail??)

We approached the whale with what seemed like five minutes left of sunlight – then we would be in the dark. I made the first attempt for a biopsy, but Rick thought it was a miss and made a second attempt. Both arrows went on either side of the boat – a troublesome outcome. We only have one net, and it's very difficult to get it from one side to the other to pick up two arrows shot at almost the same time. In a rush, Dr. Wise tried to pick up the arrow on the port side – but no luck, it was too far! A ring was tossed to mark the spot, and we did a REALLY quick 180. With a little bit of extra effort from the team (and some luck), we were able to get the arrows and the ring back in with a successful biopsy.

Also, here's a couple links you might enjoy:

1. There is a guest blog from me on their website with a really neat picture looking down on Alexandra and me from the midlevel platform. Please see it at:  
<http://www.alexandracousteau.org/field/expedition-blog/sea-cameraman-ian>

2. Camerman Ian also made a blog about his experience with us. Please see it at: <http://www.alexandracousteau.org/field/expedition-blog/whiplash-high-seas-prowl-sperm-whales-crew-ocean-alliance>

3. Camerman Ian has a video of us biopsying at <http://www.vimeo.com/14889350>

Be sure to post comments on all three sites!

## **Day 60 – Tuesday, September 14, 2010 – Whales Win Day**

During my 4am helm watch, Capt Bob was able to find the whales again just before my watch was done. I returned to bed very tired, knowing I would wake up with whales nearby. I didn't realize they were going to be within 200 yards of the boat though! Around 7:30ish, Matt woke me up, "Johnny! Whales!" Thinking they were a couple miles away, I took my time. A few minutes later I heard someone yelling that they were within 200 yards, which means we can pull up next to them in a couple minutes, yikes!

We did not get a biopsy from that whale – Rick and I had taken too long to get into position and the whale dove out of range. I resigned back inside for a cup of tea and to start downloading videos for my class. I was able to get the cup of tea ready, but before it had cooled off...Whales! I rushed back up to the bowsprit, this one was about a mile away. Then dove within a half mile...back to my tea. This time I was able to get a couple sips before whales were called again, and again the whale dove too far to sample. Back to my tea...whales again. This time I decided to just finish the tea, it had gone cold and I just wasn't going to be able to enjoy it. Back on the bowsprit, the whale was getting very close within range. Rick was the primary biopsier, and I was backup. The whale dove where we consider borderline within range. Rick and I have talked about this several times – if there's no whales in sight and this one is diving, make an attempt. Thing is, he had yet to make such a long attempt. The whale's fluke was going up (indicating a deep dive) about 25 yards ahead of us, then I saw Rick's arrow fly – and it flew true! We got the biopsy! Another HUGE male!

The next three hours were a struggle between me racing back and forth between my online classes and being at my post to biopsy the next whale – only to see it dive well out of range. After noon there were no more whales, and we realized that we had gone back to where we started yesterday! Not a huge deal, but it means we will be docking a day later than we intended (and we have some water to cover tonight). Either late tomorrow or early the next day we ought to be back to where we had that hotspot (the day with 18 biopsies before lunch) – and we hope to get a whole bunch more samples!

On a side note, Matt and I exchanged a few words about working on the boat while we were switching shifts on the mid-level. It struck us today that we just went through a weekend, and didn't even notice...

## **Day 61 – Wednesday, September 15, 2010 – Hump Day**

Sometime mid-morning, after my first watch, Dr. Wise determined we weren't going to be biopsying any whales and we weren't going to continue watches – the seas were just too rough. With this, we spent our days with work and classwork – realizing just how tired the last week and a half has made us. All of us took several naps throughout the day and woke up still feeling tired. Whether it was the rough water or just being worn out from working dawn to dusk without much of a break is hard to say. This really has been the most work-oriented leg we have had so far, and everyone is feeling it. Past legs saw lots of card games, naps, and reading when not on watch – this leg saw lots of studying and writing when not on watch. There is rarely enough time for card games, so Matt and I have been filling in the spare time by working out – the same routine that my sister was using when she was training for her soccer season on board. This is a 15 minute workout that focuses on core muscle groups, one minute of a work out (e.g. pushups, planks, crunches, etc.) then 15 sec rest until the next minute-long work out. It's about all we can do on the boat for a work out, and about all we can fit in our busy days to break the boredom of watching and studying.

Just before dinner, Dr. Wise announced that we had sped up to 1 knot (the boat averages 6-7knots) – so this is one of those days that we are struggling to get anywhere. The day is ending with one of my favorite dishes that Sandy (my mom) makes for dinner, putting in 'Bourne Identity' and pulling in the hydrophone array. Capt Bob says the boat can be pushed back on top of the array, and the propeller could cut it – meaning no more array. Dr. Wise says these high seas may last the next three days. We shall see, and I hope it doesn't last too much longer – otherwise these next few days are going to pass VERY slowly.

## **Day 62 – Thursday, September 16, 2010 – Keeling Day**

Today was very much like yesterday. I woke up at 4am for my helm shift and quickly realized there were going to be no watches today – the seas were still too rough (maybe even rougher). Turns out these churning swells are coming from Hurricane Karl. Don't worry, we are not in a hurricane, and we won't be. These are just some waves that are being caused by the hurricane elsewhere. Reminds me of when my dad and I were on vacation in New Jersey...

We had just dropped my sister off for a basketball camp in Pennsylvania and decided to spend some time on the New Jersey shore to wait for her instead of returning home. I don't remember which beach we stayed at anymore (it was not the tv show one). Being the Mainers that we were, we took to the beach to get out of the August heat. When I was MUCH younger, my dad taught me how to body surf – and this is what we always do when we go to the beach. We were shocked and excited at how much bigger the

waves were here than at home. We took to the water with all the excitement of a couple kids in a candy store. When we got in a good position to catch some waves, we noticed there was no one else trying to body surf – which struck us as kind of odd. Nonetheless, we caught the first wave that came our way and whoosh! We were carried 200 yards back to the shore, almost to the foot of the lifeguards in a matter of seconds! Neither of us had ever been in such strong waves before, and spent the majority of the afternoon body surfing and getting beached after every wave. Later we met one of my dad's friend's and her daughters for dinner. We were laughing at each other, because we were still swaying in our chairs from the strength of the waves that afternoon. The girls were calling us crazy because those were pre-hurricane waves! No wonder no one else was body surfing, they must've thought we were crazy! That didn't deter us much, we went back the next couple of days and did it all over again!

Now my dad and I find ourselves in more pre-hurricane waves, only this time we're being tossed out of our bunks! I usually brag about being able to sleep through any kind of stormy weather on the sea – so far I have. Partly that's because I have a bottom bunk on the starboard side. We usually keel slightly starboard, so I can wedge myself between my mattress and the wall and not bounce around too much from the motion of the waves. Today hasn't been the case.

Early in the day I saw Capt Bob and Rick hoisting the main sail. Not sure why – maybe to give us some extra speed, maybe to reduce the amount of rocking and rolling, maybe both. Whatever it was, we are now keeling to port! Which means my trick to sleeping through rough seas is gone with the wind.

It's not hard to see that everyone on board is exhausted from a long two weeks of hard work, with the added element of a lack of sleep from the last two days. Matt and I have continued to keep ourselves busy with class work, in preparation for assignments and quizzes due this weekend. I felt a little bit of cabin fever just before sunset (as I had been studying in my room for the majority of the day), so I stretched out on Rick's makeshift hammock on the pilot house observation deck (his hammock is a rope tied several times back and forth between the railing), and relaxed to some of my tunes while watching a bright pink sunset on some baby blue clouds. There was no sun due to the clouds, but a bright pink where the sun set nonetheless.

We are now headed to Biloxi (Mississippi?), and should be there Saturday morning. Though I should hope sooner, because I'm going to need a vacation if we get too much more of this weather!

### **Day 63 – Friday, September 17, 2010 – Major Heeling Day**

Again we find ourselves heeling way to port today. Again Matt and I spent much of our day studying and taking breaks to play cards with Rick, Carolyne, and Dr. Wise. Only difference today is Capt Bob put up the jib sail, causing us to heel even more to port.

If you don't think you understand what it's like to live on a boat that is heeling imagine this:

The room you're in is tilted way over to one side (which side depends on which way you're facing). Gravity is pushing you straight down, which is no longer perpendicular to the floor. Instead, your legs and your body are usually somewhere in the range of a 60-70 degree angle to the floor. Now imagine that room is constantly bobbing, rocking, rolling, and lurching unpredictably. Either one of these situations one can adjust to, but both becomes quite the physical and mental exercise. We don't only notice the heeling when we're walking or standing up. Sitting down, laying down, standing on your head...all are now affected. So, say you're sitting on the starboard side of the table in the main salon – that means you are seated but leaning heavily against the table.

I'm sure this doesn't sound as miserable to anyone who's sitting or standing on solid ground with the room correctly oriented to the earth's gravity – if it were me reading this, I would think it was tolerable and find many ways to exploit the new orientations of everything. Since I'm the one on the boat that has been heeling, rocking, rolling, and lurching for the last 48 hours, I'm a little worn out by it. As I'm sure everyone else is who has been through this with me.

Most of you who know me know that I am not one to be deflated or defeated by minor environmental nuisances – and I'm not. I have enjoyed hanging, swinging, and doing spin moves around things to avoid crashing into them. Rick and I had a pretty good laugh when I climbed up the stairs to the pilot house with my hands full only to be nearly tossed into the port side by a big wave that came unexpectedly. If it weren't for my quick feet and funky dance moves, I probably would've crashed into the wall (yes, I was listening to my ipod at that moment). When I recovered myself I found Rick doubled over with laughter from watching my antics, and I couldn't help but laugh at myself too as I opened the door and stepped outside (being very weary of any more big waves).

Johnny