

Day 2: Saturday, July 18, 2010

(written on July 19 about July 18)

Dear Administration and Wise Lab,

There are a lot of people copied on this email as my internet connection is inconsistent. So please if you want to reply do not hit "reply all" - just reply to me.

As I write this note we are passing Martha's vineyard. the Atlantic is throwing up some LARGE swells so please excuse any typos. Plus its sunny here in the pilothouse so hard to see. It's a pleasant morning, relatively cool, although my cabin is 85 degrees. Still have not quite solved the ac challenge there.

Yesterday, was a highly successful day. We sampled 6 whales, water and attempted fish and krill. We also all learned that the work is long and hard with fluctuating periods of intense, intense work. Our days start at 5:30 am when the first student climbs to the midlevel platform. Yesterday it was Cathy. This platform is halfway up the main mast and when the boat rocks- it really rocks up there. Johnny is up there now in these huge swells. This platform is manned from dawn to dusk in 1 hour shifts. So basically our four students rotate going up there every hour for a 14 hour day. When not on watch there are data logs to keep. a lab to maintain and other duties that occupy much time. The purpose of being on the watch is to scan for whale blows on the horizon.

When a whale is spotted like yesterday, the intense work really begins. All hands come on deck, the cook ascends to the platform to relieve the student and everyone goes to their station and watches for the whales. The whales spend time at the surface punctuated with periodic dives. When they dive you have no idea where they are so you anxiously scan the water looking for them to resurface. When the whale is close, the dart is fired and the arrow bounces off and into the water. That event happens so quickly that if you blink you have missed it. Yesterday, Johnny biopsied two whales. Next, is the collection of the arrow. one of two things happen, we are able to scoop it rapidly (remember the boat is moving so its moments before we are alongside the arrow) or a life ring is tossed to mark its approximate locations. Matt has been in charge of the arrow retrieval and did a fine job. Simultaneously, with the arrow retrieval is the photo id. The goal is to get a photo of the full tail fluke. Thus, the photographer must block out the frenetic energy of the arrow retrieval and focus on the whale getting some dorsal pictures and pictures of the tail. Kellie was the photo id person yesterday and I think we have ids on all of them. Meanwhile, a arrow is retrieved and handed to the cell culturist who removes the sample from the dart tip, takes it down into the lab and processes it. Cathy is the cell culturist and got all of the biopsies save one that was skin only into culture. Of course working hand in hand with u sis the crew. The captain is bringing us alongside the whales. One crew member is recording data another is the second biopsier and a third is taking pictures of the activity and acting as photo id backup. And me? I am taking some pictures as moments allow, adjusting the activities as need to be and filling in wherever needed.

All of that sounds straightforward, I imagine, and when we sampled the first whale it was. But then came the second round. 5 whales adjacent to the boat and we make every effort to not sample the same whale twice. So now there is an arrow fired by the first biopsier, and then another by the second biopsier and everything goes into motion and the pace becomes truly frenetic and the arrow retriever is trying to get the arrows. One photo ider is trying to get the photos and the second is trying to guide the biopsiers which whales to avoid. The biopsiers are working with the captain to try and align the boat for the next sample and the data reorders is writing as fast as possible. The cell culturist for course now has her work doubled but no extra time. Once all is done, its back to the watches and scanning for other whales. So you can see long watches punctuated by intense periods. We ended our day at about 10 pm when all was said and done.

Our science team meeting when reviewed the day, was at 9 pm as we watched the last traces of the sun sink into the ocean. Most fittingly, it was an orange sunset. Johnny, Matt and Kellie had the view of the day as they saw a full whale breach right in front of the sunset on the horizon.

The team really worked well and worked hard. We are hoping that Cathy will be the first person in history to successfully culture a cell line on board a sailing vessel at sea and maybe in any vessel at sea. We are also hoping that she is the first to culture a humpback cell line. We shall see. We do need to give an extra tip of the cap to Cathy as while the rest of us were above board in the sun and sea air and working but also enjoying the view of whales near the boat and breaching and playing. Cathy was in the lab (80 degrees) carefully processing the samples and missing the sights. She did see whales and she did get some pictures, but she also sacrificed many views and cooler weather to make this effort work. So, kudos to her for doing so without a complaint and really kudos to the whole team for working so hard and so well.

Let's hope those cells grow and history is made.

Today is day 3 and we are up at 5:30 an rolling with these crazy swells. Iain is at the helm and so I keep teasing him that he need to learn to drive, but seriously he is doing well on very rolling water. No one appears to be seasick anymore. Kellie is now ascending the mast to relieve Johnny.

Already is been truly a remarkable experience.

More when I can.

John