

Day 73: September 27, 2010

No whales today. Still some interesting work though. Johnny threw a net over some Sargasso weed and caught a bunch of krill. His intent was fish, and he caught some of those, but when he brought on board a gajillion (highly technical scientific term :)) spilled on deck. The team then collected the krill by spooning them up and into buckets. They collected enough to do good contaminant measurements and now we have a krill sample collection protocol.

The krill were a bit of a fun thrill for us. You may recall in the beginning in the Atlantic we caught ten krill. Ten! For those of you who are unfamiliar with krill and most of us are having never seen them. They are teeny tiny little critters eaten by the boat full by baleen whales like humpbacks and blue whales. An average krill looks like a tiny shrimp and is about half an inch long. A whale will eat 2-3 tons of them a day. So ten was not an amazing catch level. Of course as we dug into it we learned that 10 actually is a pretty good catch as humans are not very good at catching krill and most large swarms of krill are in the cold oceans and not warm waters like the Gulf. We have not focused on krill so today's catch was surprising and fun - like kids at the beach.

I have attached pictures of Johnny and Captain Bob collecting krill and of the Sargasso weed all over the deck between Johnny and Kait (Kait has the blue hair).

We also got our air sampler going. Johnny worked with Captain Bob and they stationed the air sampler halfway up the mizzen mast. Once installed Bailey went up and added the collection filter and just like that we became I think the only group measuring particulate marine air quality 80-100 miles offshore. There could be someone else, but I have seen no such data for years.

For me it was mostly a reflective day. A time to reflect on why we are here and how we have gotten here. We are 73 days in to what we believe is the only study of metal, oil and dispersant toxicology in whales in the Gulf of Mexico. Certainly, we know we are the only ones making cell lines and dosing those cells to learn what happens to them. We are collecting water, air and prey. We are collecting fish and worms and soon jellyfish and dolphin blows. We are recording everything we see, most of what we here and collecting a variety of trash we see in the ocean. Truly a remarkable amount of data and opportunity to learn.

And learn we have. We have come to understand in our hearts and our guts what this crisis means to the people of the Gulf. We understand better in our heads the potential devastation a similar crisis could cause the Gulf in our own backyards. We have learned how to collect the array of samples we now pursue and our capacity to still do more. We have learned to sail, to live at sea, to work as a unit, to tell the story to many of what we are doing. But most of all, we have learned that we are all in this mess together- all of us.

We will learn more. We will get better and better at the work we do. We will add more capacity and questions. We will discover the impacts of this crisis on our whales and on ourselves. We will learn what to do better if this happens again and hopefully how to prevent it.

Already, we have our first data rolling in. Human skin cells treated with dispersants. Work done by James our Fed-Ex star. Its only 1 experiment, and not one to go to press, but you all are in this effort with us and I thought you'd like an early preview. Chemical dispersants do kill human cells. Enough of the talk that they are non-toxic. The question now is not if but how much and did the Gulf levels reach the level of how much. Oh and Anne, metabolizing it makes it more toxic. There is still a lot to do before these data are ready for prime time and James is hard at work getting it ready. So keep it amongst ourselves for now to give him to bolster the data.

I thought a lot about how we got here. We started with James, Johnny and Cathy, a small band of three undergraduate students who immediately began collecting data and engaging more students. We were then lucky that Iain Kerr, a CEO of a small nonprofit was willing to go to his board and commit their boat to this expedition with no funds in sight plus his Board led by Jeff Kunz who approved that commitment. We were blessed with a USM, President Selma Botman, USM Provost John Wright, and USM VP of Research Samantha Langley-Turnbaugh who had the courage and wisdom to see the urgency of the need in the Gulf and launched us on our way. We were further blessed with the support of Mark Spalding and Tom McMurray of the Ocean Foundation who gave us both essential moral and financial support. Next, was the Campbell Foundation, Quiznos and the Marisla Foundation who gave key financial support at a key time. Along with these efforts came the work and we had scores of students and volunteers stepping into help many of whom you have read about in these emails. Truly a team and group effort. There is more to do. Oh so much more to do.

But as I reflected on the last 130 days going back to the beginning, I felt a large sense of accomplishment and success. We are only at the very tip of this toxic iceberg, but wow look how far we have come since my first text was sent to three undergraduates on asking for help. I thank them for stepping up immediately. I thank Iain and Roger and Ocean Alliance for joining me in this quest. I thank USM for launching us and letting us be out here doing this work. I thank the crew of the Odyssey for sailing us around and keeping us safe. I thank Johnny and Matt for being willing to stay here on this voyage with me from beginning to end working day and night regardless of task and condition. I thank all of our students and staff for the times we shared on the boat and in the lab and the many hours of hard work. I thank all of our supporters for helping us in so many ways financial, personal and professional. I thank all of you for listening and encouraging these many days. Bill Hawkins maybe right, our quest may be noble. It is certainly necessary and I could not and would not have wanted to do it without all of you.

Thank you and good night.

John



