## Wednesday, April 6, 2016 – Day 5 at Sea

I started developing my whale research in 1998. Hard to believe 18 years have passed as those first days seem like yesterday. I've worked on many species from whales to sea lions to sea otters to polar bears. Shoot even humans are considered marine mammals for that matter and we work on them too. But going back to when I started, and then back even further, the whale I most wanted to see and study was the blue whale. Yet, try as I might – blue whales always seemed just out of my reach. We worked on blue whale cells, when a colleague gave me a sample. My daughter Cathy did those studies. But, still each time I went near the sea, be it on boat or land, I hoped I would see one of these magnificent creatures. I am not sure why I was fascinated with them. I just was.

## Today was finally the day.

The day started with a couple of pods of short finned pilot whales. Very cute whales travelling in a small group. We managed three biopsies of them and it seemed liked it was going to be an exciting day. But as sea research days often go, the day quickly settled into a quiet routine of changing watch shifts and the hum of the engine churning away. There was nothing to see and all was quiet. A bird flew by – it was a masked booby – but not much was going on. The team carried out its duties with focus and efficiency, but a sense of no further sampling for the day started to set in.

Late in the afternoon as the light was fading, several of us were talking in the pilot house. Suddenly, Johnny bolted up, in the pilot house and yelled "whale blow, 9 o'clock". He then ran to the bow and we yelled up to Mark on the mast. Soon Johnny spotted a tail fluke. That left three possibilities – sperm whale, humpback or blue whale. Each has a distinctive shape to their tail. Johnny came into the pilot house and described the fluke. It was not something he had seen before. He has biopsied hundreds of sperm whales and dozens of humpbacks – so I knew then this whale had to be a blue whale. The question was could we find it, get near it and biopsy it?

To be clear all whales have a tail fluke. It's just that not all whales lift their tail flukes out of the water when they dive. Thus, with other whales you simply cannot see their tail flukes in the air. But, sperm whales, humpback whales and blue whales frequently raise their tail flukes almost in a gesture of waving goodbye as they dive down deep.

The team took a collective breath and renewed their efforts to find this whale. Everyone wanted to see this magnificent whale that grows to be the biggest animal alive on earth.

With Oona at the helm, Mark in the crow's nest, Mike on the rigging and Johnny, Rick, Carlos and me in the foredeck, we pressed on with our search. Closer we crept forward. Closer. Closer. We would have these anxious periods between dives of wondering where it might surface. Yet, it stayed just ahead of us. Finally, it was in sight. Carlos pointed out that we should look for the blue water as there is something about the whale's coloration that creates a bluish glow of a reflection in the water. We all saw it! So this is why the blue whale is called a "blue" whale.

Mark called in the position from above. We all scanned the water for the blue glow. There it was quite close!!! But, just a tad too far for a biopsy. The whale dove and we all marveled at the sight. We kept search only now it was harder for the whale had been right next to us, while before it was in front in the distance. Where did it go? Where would it surface? We slowed our speed and looked.

I view my role at sea as one to make sure all is running smooth. I try to allow my team to enjoy the various hands-on activities and then integrate all of what is happening to be able to make decisions when key decisions are required. I can and have done all of the various roles, but my feeling is that my team is there to handle their roles and I don't want to take that away from any of them. If all is running smoothly, my function is mostly to encourage and oversee. If things are awry, then I am doing many of the various tasks. With this team, things function quite smoothly so mostly I stand back by the pilot house and hop in where needed. Generally, I stay out of the foredeck and let the team work. But, this whale was a blue whale and I had waited a long time to see a blue whale. This time, I moved right into the bowsprit with the biopsiers to see the whale up close. Everyone understood. Now, we just had to find the whale.

Suddenly, the whale surfaced right behind the boat! Oona turned us around as the whale dove. We search for the blue glow. Carlos starting yelling "It's right there! Right there!" When someone yells like that – the whale is so close – they cannot express in words exactly where it is. We all looked down and sure enough – there was the whale in all its fantastic blue glow – right under us in the bow. Wow! What a breathtaking and awesome sight!

Only problem was – the whale was close in and perpendicular to the boat. The biopsiers were at the wrong angle. A sample would be exceptionally difficult. But, there was an odd wrinkle to the biopsiers positions. Normally, they are next to each other, I was in the bowsprit between them, which created more space. Johnny was the furthest in the bowsprit and he had no angle for a shot. Rick, however, leaned way over the rail and released his arrow! It hit! He had just enough of an angle to take a perfect biopsy! We recovered the arrow and we had done it! Our first blue whale biopsy. The team was abuzz with excitement.

The light was low as the sun was setting and it was overcast. We called it a day and shared our stories of our individual thrill from this magnificent whale. We are up to 16 whales biopsied. It's been a success so far.

I have attached images of the blue whale and the biopsy from it.

John









