Sunday, April 23 – Day 13 by Dr. Wise

Dear All,

You have heard, or should I say read, about a number of different whales we have biopsied over the expeditions we have done. Occasionally, I am asked which is the most difficult. Ultimately, there is no 'easy' whale to biopsy, they each pose their challenges and strategies.

Really, it depends on whether the question is the whole process from spotting to sampling, or if we are just talking the actual biopsy from the crossbow. Easily, I'd say from the crossbow-only stage (i.e. only considering releasing the arrow) – the sperm whale is the easiest, because the provide the clearest tell when to prepare to release the arrow and then present the broadest area to target, but really the true challenge is in the entire process.

As I see it, there is no easy, there is simply different degrees of complicated. Sperm whales, as I said provide a clear tell with a pre-hump, which usually means a large hump will follow for the deep dive, providing a broad target (compared to the other species) before it dives. Still sperm whales are not easy, for when the dive, they can dive for 10 minutes to two hours and the real challenge becomes waiting them out and figuring out where they will surface.

We have become very effective at sampling Bryde's whales. Each of them darts around in a playful manner, and you play along. Eventually, they simply pop up near the boat at some random moment and give you one clear sampling path-you either get it then or give it up, because they then seem to get bored of playing with you, or conclude you are not up to the challenge and move on, and you cannot get close enough to biopsy.

The fin whales are simply fast with blazing speed. Also, they do not show a lot of their body above the surface. So they require a fast boat, or a lot of deliberate patience and time, almost as if, in a slow boat, you lull them into forgetting about you as you are too slow to bother them.

The humpbacks like to dance, both above and below the water. Unpredictable in their movements, they wiggle around and lead you in a merry dance. Perhaps, the tail flick they almost invariably provide at the end of the dance (and they provide it whether you completely miss the whale or sample the whale so it is not a reaction to the sample itself) is their version of a bow/courtesy and the end of the song. Either that or maybe they are trying to swat the arrow out of the air like we would do when playing with a soap bubble released in the air.

Looking down at pilot whales, you will see more whales than you have ever seen before as they tend to travel in pods. Oh, they'll confuse you quite readily as they dart through the water. However, Johnny describes the solution really well – pick one, focus only on it, and get the sample. On top of that be aware their tell is different, they will hump to dive, then a pause and then the rest of the whale.

Now minke, whales provide a yet different challenge, and require you to play a game of chicken with them, as they are quick and not above the water a lot. Each time, we have had to go straight at the whale as if we will collide, and then take the biopsy as they decide you're not going to turn

after all and so they do. Yes, minke Biopsying is for sure a challenge and maybe the hardest to do. Them or the really shy whales like pygmy sperm whales and beaked whales that quickly dive and don't return.

Of course, we have only sampled the one blue whale, and so are unsure of the best strategy for them. Our last approach was to simply lean Rick way over the side and let him take a miracle shot… I think there might be a better way than that. Hopefully, we will see some and optimize our approach.

In the end, each species has its own way and we adapt to it. We are doing pretty well at it as we have sampled 51 whales with the 6 we sampled today.

All is well with us in the Sea of Cortez. We are at anchor in Puerto Refugio. We are re-energized after a remote island adventure. We are at 29.32.165 N and 113.33.000 W if you want to follow along on Google Earth or similar-type program.

You can see all the emails from Day 0 through todays (Day 13) on
www.WiseLaboratory.org.

Good night from here until tomorrow.

John