Johanna Vasquez Option 2: Scientist/Educator Webcast

Webinar with researcher at Pacuare Reserve, Costa Rica

During one of my live sessions for Life and Marine Science, we had a live visit from a scientist (I do not have her name) that had conducted research on leatherback turtles at Pacuare Reserve in Costa Rica. I was excited to hear about her research as I had gone snorkeling with sea turtles in St. John, USVI when I was in high school and loved the experience.

The Pacuare Reserve is an 800 hectare reserve and ecology center that offers ecotourism as well as educational and research opportunities. They are located on the Caribbean coast of Costa Rica within the rainforest. Their website boasts "Pacuare Reserve and the surrounding canals are rich in wildlife, with more than 300 recorded species of animals, 3 species of monkeys, over 200 species of birds, and rarer species such as jaguar and ocelot (https://www.pacuarereserve.org/)."

The webinar was the researcher explaining her experiences and the multiyear study of leatherback hatchlings that she was involved in. She described tagging the turtles. This in itself presented challenges as she described the size of the hatchlings compared to tags and the texture of their shells as being difficult to attach tags to.

What I found interesting about the webinar was that they were tagging the turtles and then taking them by boat to release them past the surf break. I was curious as to why they were not released on the beach, but instead further out in the water. I imagine that from beach to the same location would be more difficult travel for the turtle requiring more energy to pass the surf and it would be exposed to more predation along the way. I also wondered if maybe this was done to prevent the tags from being knocked loose as it passed through the surf.

It was also interesting to hear about the birds that would surround the boat and the researchers looking for a little turtle snack. Although this was mentioned, she did not mention how many hatchlings were lost to predation during their release.

The last thing that I took away from this was the connections to the Nature of Science matrix from NGSS. Nature of Science Matrix: (https://www.nextgenscience.org/sites/default/files/Appendix%20H%20-%20The%20Nature%20of%20Science%20in%20the%20Next%20Generation%20Science%20Standards%204.15.13.pdf)

I am always trying to show my students (and my children) how science is done in the real world. When we discuss real life science practices this matrix becomes most evident because it is used to:

- Show that science uses many methods. Students who would learn about this study could talk about what things they would change if they were doing the study, did they think it was a good study, why or why not?
- Show that knowledge can be revised with new evidence. Students could discuss how this might change scientist thinking about turtles, what new knowledge could they gain from doing this study?
- Science is a way of knowing. If we try to do research about turtles most of what we would find came from scientists who studied turtles in a similar way, making observations and sharing their knowledge.
- Science addresses questions about the Natural and Material world. Students would see that scientists use studies like this to answer many questions they may have. They design investigations or studies specifically to answer questions that they have.