Students and Parents Succeed in a Scientific Treasure Hunt

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Science, a storm, and school children came together on the morning of Valentine's Day to rescue a special electronic tag from the flotsam and jetsam on a Frisco beach. It was a tag that popped off a bluefin tuna and it contained valuable information about the travels and habits of the big migratory fish.

Here's the way it happened.

On Wednesday night, Feb. 13, Dr. Molly Lutcavage, director of the Large Pelagics Research Lab at the University of New Hampshire, emailed some local boat captains, asking them to help recover a small, black pop-up satellite tag that had apparently come off a juvenile bluefin tuna. The 48-inch bluefin was tagged in a special project last August off Cape Cod.

The Large Pelagic Research Lab initiated its Tag a Tiny program in the summer of 2005. The goal is to study the annual migration paths and habits of juvenile bluefin tuna in order to better understand and conserve this highly sought after gigantic tuna whose populations are threatened by overfishing.

And now one of the $4,000 tags was off the fish and floating toward land. The messages being received from the satellite tag indicated that it was bobbing around in the rough seas off Hatteras Island. All day Wednesday, heavy winds had whipped up large waves and high tides along the island.

Ashley Hodges, 13, a seventh grader at Cape Hatteras Secondary School of Coastal Studies, and her mother, Alex, show off the satellite tag that Alex recovered the morning of Feb. 14 from a Frisco beach.

On Thursday, Feb. 14, the morning after Lutcavage sent her email to local captains, Nuno Fragoso of the Large Pelagics Research Lab, contacted Tracy Shisler, a science teacher at the Cape Hatteras Secondary School of Coastal Studies, and asked her for help. He asked if parents of the students might go the beach, to the area from which the tag was transmitting a radio signal and search for the tag before it got washed out again in the tide. If the tag wasn't found by the end of the school day, he asked if students might join the search. Lutcavage could see, using Google Earth, that the tag seemed to be located on the beach, near the airport.

Fragoso emailed Shisler a picture of the tag, Google maps, and coordinates for the location of the tag on Thursday morning. He also noted that there was a $250 reward for the return of the tag which can be refurbished and deployed on another juvenile bluefin. The students got on the phone with their parents, and Shisler sent the information to all of them with email accounts.

Ashley Hodges, 13, a seventh grader in Shisler's class was one of the students who called her parents. She reached her mother, Alex, who was on her way from Buxton to Hatteras after having delivered another child to school.

The GPS coordinates put the tag on the beach very near Ramp 49 in Frisco. Alex Hodges has a GPS unit in her vehicle, so she turned off the highway and headed to the beach.

Hodges says she drove the beach for almost a half hour and saw nothing. She was ready to leave when she thought about getting out and walking a while on the sunny but cool morning. In just a few minutes, she noticed the debris line up near the dunes from the storm's high tides. She walked up and started poking around. And there it was – the elusive satellite tag!

Hodges took it to school for Ashley and her classmates to see. "The students were very excited about the parent finding the tag," says Tracy Shisler. "Alex Hodges brought the tag in and the kids were thrilled to be able to see what the tag looked like. I was emailing back and forth with Nuno, and I would read them the emails. They thought of it as an adventure unfolding before their eyes.

Alex and her husband, Dr. Al Hodges, donated the $250 reward for the tag to the school for a trip the middle school students plan to take to the Smithsonian Institution in Washington, D.C. Other parents, Dan and Jennifer Johnson, arranged for special FedEx packing to send the tag back to Microwave Telemetry in Maryland, the company that makes the tags and will recover the data.

In another interesting twist to the great tuna-tag hunt, the inventor and head of Microwave Telemetry, Inc., is Dr. Paul Howey, who has a vacation home in Hatteras village and knows Tracy Shisler and her family. Further, the Howeys are neighbors of the Hodges and friends of the Johnsons!

"The process of recovering this tag has been a great interactive learning opportunity for the Large Pelagics lab and the Hatteras students and their parents", Molly Lutcavage wrote in an email. "The tag finders now know more about their local marine resources and have had a first hand look at the very latest technologies that fisheries scientists use to track marine animals."

The students in Shisler's sixth- and seventh-grade are involved in a fish and oyster hatchery program.

"A major theme of my teaching," Shisler says, "is that we need to be better stewards of our planet Earth. I am hoping that they realize that whenever they get the opportunity to help care for the Earth, they should step forward and help. I also want them to realize that science is exciting, fun, and interactive."

Tracy & Paul; Chris, Dan, Paul & Chris; Students in classroom

In April, Chris and I had the privilege of meeting with Ms. Shisler and her students at their school. We told them the background of the X-Tag that popped up off Hatteras and then washed up on the beach near their school, and about many of the projects our PTTs have been used in. Tracy Shisler's enthusiasm has obviously inspired a new generation of scientists. We hope to involve them in a new project soon, maybe this time tracking their own pelican?

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