



# Helping out remotely

By PATTY RAMUS  
News Staff Writer

On Wednesday afternoon, 18 students from Bob Thomson's fifth/sixth grade class at Sanborn School earned two remotely operated vehicles and other equipment from the Great Lakes Maritime Heritage Center to the City of Alpena Marina.

Thomson and his students loaded their gear onto the National Oceanic and Atmospheric Administration research vessel Storm, where personnel from the Thunder Bay National Marine Sanctuary and other NOAA staff awaited their arrival on the boat. After the students were given a run down of safety procedures, they headed out to the site of the Oscar T. Flint shipwreck.

The students had multiple reasons for their trip. They were to conduct the first of two scheduled dives on the Flint using the two ROVs for collecting data on zebra mussels and making video samples to make an accurate assessment of the amount of weight the zebra mussels are adding to the shipwreck. They also were to test water samples and make observations for a substrate experiment. The substrates were different materials such as wood, metal and glass that two sanctuary divers secured to the lake bottom to help the class track the development of zebra mussel colonization.

In two groups, the students operated the two ROVs after they were deployed by marine sanctuary staff, while others tested water samples. The students rotated positions and got chances to drive the ROV and conduct other tasks. While Thompson and those students were on the Storm, another portion of the class stayed at the heritage center to do testing in the Thunder Bay River and take part in other activities. Today, those students will go on the Storm for their chance to conduct the same experiments their classmates did on Wednesday.

"We're really excited about the stewardship that this is kicking off with the kids," Sarah Waters, marine sanctuary visitor experience coordinator, said of the project. "We're really excited that they're learning about the effects on the shipwrecks and the tourism economy."

The two trips are a culmination of a project that's been ongoing since the previous school year. According to Thomson, the Thunder Bay River Watershed Project was created by last year's fifth- and sixth-graders with a focus on understanding the health of the watershed, how to test the health and how invasive species disrupted the balance of the river's watershed ecosystem.

The research led the students to conclude the



News Photo by Patty Ramus  
Tane Casserley, Thunder Bay National Marine Sanctuary National Maritime Heritage Program coordinator, deploys a remotely operated vehicle into Lake Huron off the R/V Storm on Wednesday afternoon. Students from Bob Thomson's fifth/sixth grade class at Sanborn School were on the vessel using two ROVs to conduct research about zebra mussels.

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impact of zebra mussels has economic effects as well as ecological. In addition to studying the effects on the fishery, the students also hypothesized about the effects the zebra mussels were having on shipwrecks. The research question the students have developed focuses on whether the zebra mussels are protecting the shipwrecks or slowly destroying them.

Through funding Thomson received through the Great Lakes Stewardship Initiative, his class has been able to partner with agencies such as the U.S. Fish and Wildlife Service, Michigan Department of Natural Resources and Environment and the marine sanctuary to develop a research process that will allow them to formulate or determine attachment rates of the zebra mussels, substrate preference and possible damage done when the mussels attach to the substrate.

This year's research has focused on collecting and confirming the results of the previous year's research. The research will be used to formulate a plan of action concerning the zebra mussels, Thomson said.

"We want to produce some kind of report that helps summarize it all so we can make an assessment as to whether the zebra mussels are doing anything to the shipwreck. We'd like to produce some kind of scientific report and get it published," he said.

Waters said the sanctuary is interested in using any data the students will collect on the mussels. Partnering with the class is fulfilling part of the sanctuary's mission for education and outreach outlined in its management plan. Shipboard educational opportunities is one component of this. The students also are getting field experience and able to see the job opportunities from interacting with NOAA personnel.

Sixth-grader Jalen Troy said she has learned about how zebra mussels affect the shipwrecks and was surprised to learn how much weight they add to the wrecks.

Audrey Collins, another sixth-grader, said she has learned the native species are important to the Great Lakes and how removing them impacts the ecosystem.

"I hope that people will become more aware of how important wildlife is and it's not just something to be taken advantage of," she said.

Thomson said he hopes to work with the marine sanctuary to make trips next year to check on the substrates that were placed and continue with the research.

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