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FEATURED

Blue Heron students collect marine data on Indian Island

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Blue Heron Middle School eighth-graders Jazmyn Taylor, left, and Macy Smith count and measure members of different fish species at Kilisut Harbor May 3.

Photo by Kirk Boxleitner

For the fourth year in a row, Blue Heron Middle School students had an opportunity to put their environmental education to practical use at Naval Magazine Indian Island. The students have been collecting data that the U.S. Geological Survey plans to use to measure the impact of the proposed Kilisut Harbor/Oak Bay reconnection project.

Jake Gregg, a U.S. Geological Survey fish biologist assigned to the USGS Marrowstone Marine Field Station, was contacted by Blue Heron Middle School eighth-grade teacher Leslie Shively, who was seeking opportunities for her students to collaborate with the community.

“We wanted something that could integrate their language, arts, math and social studies lessons into a single project,” Shively said.

Gregg noted how he had been interested in documenting possible changes to marine wildlife after the isthmus was opened, but knew he’d need a few years of baseline findings before its opening to use for comparison.

“We simply had no one to do the monitoring,” Gregg said.

Four years later, Gregg and Shively have become practiced hands at guiding her eighth-graders through seine fishing, which is the method used to gather nearshore aquatic life, including fish, crabs and other sea creatures.

Lyle Britt, with the Groundfish Assessment Program of the National Oceanic and Atmospheric Administration’s Alaska Fisheries Science Center, noted that the USGS has teamed up with NOAA on this project, but agreed with Shively and Gregg that adults such as himself primarily provide oversight and occasional guidance to the students, who conducted the actual work of data collection May 3-4.

“For the most part, they show up already knowing what to do, and they do it very well,” Britt said. “They count the numbers of each fish species, measure each fish’s length and record that data. It’s not just a good learning experience for them. They’re collecting real data that will serve a real purpose.”

Britt explained how the Blue Heron students’ participation means the difference between about 30 students being able to collect that data within an hour or two versus an available crew of fewer than half a dozen adults spending “multiple hours” sorting through the same sizes of marine life catches.

“The longer it takes, the more likely the fish are to die, so the more equipment we need, like chillers, to try and keep them from dying,” Britt said.

Britt lamented the current conditions of Kilisut Harbor, the body of water separating Indian and Marrowstone islands. In the early 1900s, a causeway and two bridges were constructed across Kilisut Harbor channel in support of State Route 116. The historic tidal channel has since closed because of reduced tidal exchange.

“The diversity of our catch today has been low, maybe five or six species at the most,” Britt said. “Of those, most were either sculpins or juvenile surf smelt. We probably brought in several thousand surf smelt. The water exchange isn’t so good right now, and as those waters get warmer, it adversely affects the species compositions and populations of the fish.”

Gregg agreed that, in theory, the water quality and health of the marine wildlife in Kilisut Harbor should benefit from the proposed reconstruction of historic conditions at the southern tip of Indian and Marrowstone islands. The reconstruction would rebuild beaches that support fish spawning, and stimulate the growth of kelp and eelgrass, where younger fish can hide from predators.

“Either way, we will be writing up findings based on the data these kids have gathered,” Gregg said. “With four years of data, at four different sites in Kilisut Harbor every year, we’ve seen every kind of condition, hot and cold. So, if there’s a dramatic change, after an open channel has been re-established, we will detect it.”



For Shively’s students, conducting actual scientific research allows them to test-drive scientific professions.

“They get to see what life is like for folks who work in these job fields,” Shively said. “And because they collected this data, they can draw their own eventual conclusions about whether or not the restoration efforts have been a success.”

Gregg laughed as he admitted, “I’ve got a daughter who’s in fourth grade, and she would kill me if this program was discontinued before she got to take part in it, so we’ve got another four years at least.”

Shively added: “Listen to their voices. These kids are curious, engaged and enthusiastic.”

Bill Kalina, environmental manager for Naval Magazine Indian Island, recalled that the previous commanding officer’s son was one of the eighth-grade students who took part in the project.

Kalina explained that the U.S. Navy is a partner in funding the Kilisut Harbor/Oak Bay reconnection project, and owns about 80 percent of the property involved in the project, so supporting such data collection makes sense to the Navy.

“The Navy is part of this community,” Kalina said. “We have a duty to show we’re good stewards of the environment. I’ve always believed in supporting the environment, and if we can help educate the youth about the importance of this ecology, all the better. They’re the ones who will have to step up as its future caretakers.”

Gregg thanked Kalina for hosting this project, and for facilitating the visitors’ background checks to allow them entry to the base.