

Herring Gut News

FALL 2010

A QUARTERLY UPDATE TO OUR SUPPORTERS

Herring Gut Teaching Methods Gain a Greater Audience

IF YOU'VE SPENT time here at Herring Gut, you know we like growing things. We like cultivating environments that foster growth. We take care of tiny crustaceans and fish and plant tiny seeds with the understanding that our attention and knowledge will grow them up. If they don't, we know we have to go back and ask questions.

Learning is a dynamic, roll-up-your-sleeves process here, and we were glad to share our experiential teaching methodologies with eight educators during Herring Gut Professional Development Institute's three-day pilot workshop in July. Three K-8 teachers joined us from local school district M.S.A.D. #40, one from the island of North Haven, two from southern Maine and two from Ipswich, Massachusetts. Participants were housed and fed daytime meals at the Thomson House, on campus; they explored Port Clyde in the evening.

The pilot workshop was designed for educators to teach science more effectively in their home classrooms. Using aquaponics (pairing fish and plants in one integrated system) the teachers gained training in how to meet content standards and engage students of multiple grade levels, learning styles and abilities. A complete classroom aquaponics system was provided to each participant with an instructional manual and lesson plans from Herring Gut's standards-based aquaponics curriculum.

What did teachers learn?

The first activity involved calculating "food prints." After an overview on aquaculture, hydroponics, and aquaponics, they had to calculate how much land they'd need to produce their food for one year. A discussion followed about how to reduce the amount of land

needed by changing eating habits, employing sustainable agricultural practices, and using technologies like aquaponics.

Next, the teachers sampled one of our tilapia tanks. This activity conveyed the practical math of aquaculture by calculating average weight, feed conversion ratios, feed amounts, and time to harvest. Participants were exposed to the capabilities of their classroom systems,

What did the teachers have to say?

"The content was 100% appropriate for what I want to do in the classroom...and after this I want to do it in my home as well!"

"This was a relaxing, encouraging, and beautiful place to learn. Thank you for the food and accommodations that was so conducive to thinking as well as learning."

"Excellent instructor who provided lots of ideas for classroom lessons. Sara obviously loves what she is doing... Perfect content for middle school students... One of the best workshops I have ever attended."

and larger aquaponics systems, to run experiments and demonstrate many natural earth cycles when they explored the nitrogen cycle.

Day two included the construction, general care, and maintenance of the classroom aquaponics systems. Once familiar with the systems, the group brainstormed ways they'd like to integrate the systems into their classrooms, with excellent ideas for everything from general plant biology to literature and history.



Teachers use chemical compounds to determine nutrients found in greenhouse crops

On the last day, the class learned how to troubleshoot fish and plant problems in their systems, including a step-by-step protocol in dissecting a fish for diagnosing diseases. They followed this up with an investigation into testing plants for nutrient deficiencies - all activities easily used in their classrooms to engage students.

Why does this matter?

Research demonstrates well-qualified educators are the single most important factor in effective education and student achievement. Teachers with more content knowledge have an improved interaction with students through questioning and discussion.

Herring Gut's experiential teaching methodologies are a great fit for professional development training workshops. Engaging teachers who can stimulate the minds and imaginations of students in their own classrooms fosters academic excellence beyond our campus here in Port Clyde.

Next summer the Herring Gut Professional Development Institute will present three residential summer workshops for teachers in July.

Now that's the kind of growth we like to see.

Summer's Bounty

MAINE OFFERED up one gorgeous day after another this summer, however, all that good weather would have gone to waste if it weren't for the efforts of our summer interns **Shannon Cressman** and **Caitlin Houlihan**, and **Jackie Baker**, our junior camp counselor. Kind, patient, knowledgeable, funny and hard-working they drove, trekked, improvised, imagined, instructed, cajoled and comforted our summer campers into a rich learning experience worth writing home about.



Caitlin Houlihan joins in a game of "captain" with some pirate mateys.

86 families signed up for camp, with a number of children coming more than once. Our treasure-hunting camps were overflowing troves of fun and adventure. *Paddlin' Down the River* with Port Clyde Kayaks continues to make a big splash



A young camper meets some local wildlife.

too! Campers learn to safely operate a sea kayak and then spend a day on the water taking in the marine life and landscape of the St. George watershed.

Our greenhouse sold 172 bundles of herbs and lettuce with the help summer intern, Jason Pierce. Harborside Market provided retail distribution along with



Herring Gut's classroom was packed to the gunnels for our Sardine Stories night.

community members stopping in at the campus.

We were literally **packed in like Sardines** the night of August 4th, when we opened our doors to a public discussion of the Sardine Factory that had been here in town until it burned in 1970. The event inspired everyone in the room to think about the history of Port Clyde, the richness of community and friendships developed over a packing table and what is lost when a factory closes. Many thanks to **Gary Lawless** and **Karin Spitfire** for galvanizing such events up and down the coast this summer.

Our **Geocaching** evening event was attended by treasure hunters of all ages; using GPS devices, coordinates from the Internet (www.geocaching.com), local knowledge, and a sense of adventure, attendees set out to locate the hidden container (cache) at Marshall Point Lighthouse. Once found, it is customary for seekers to take a treasure from the hidden cache, leave a treasure for the next players, hide the cache back in the same location, and, once home, report their experience on the geocaching.com site. This evening was enriched by the many geocaching experiences of Port Clyde resident **Margot Kelley**. Margot explained how a simple test of new satellite access in the year 2000 inspired this worldwide, 21st century game. She also reminded the audience that while we have every reason to be suspicious of increased information being used for ill, there are millions of "Geocachers" leaving surprising gifts in beautiful places for people they've never met, every day.



Staff News



Ann Boover

ANN BOOVER has been named as our **Aquaculture and Marine Science Teacher**. Ann held the position of science and master teacher at the Abby Kelley Foster Charter Public School in Worcester, MA before moving to Saint George in 2007. Ann will teach middle and high school students, develop curriculum, guide professional development programs for educators and outreach activities for the public.



Alex Brasili

ALEXANDRIA (ALEX) BRASILI joins our staff as an **Island Fellow**, an Americorps position in cooperation with the Island Institute. Alexandria grew up in Leominster, MA. She received her B.A. in Biology with a focus in Marine Biology and a minor in Italian from Bowdoin College in May 2010. Alex will develop the aquaponics greenhouse and hatchery business plan, increase our community outreach, and conduct a feasibility study for a potential student-run aquaponics and community garden summer program.

New Marine Science Curriculum

THIS FALL, Ann Boover, our Aquaculture and Marine Science Educator, will pilot a new Marine Science curriculum developed by three mid-coast teachers. The project was funded by the U.S. Department of Education. Under the direction of HGLC Director Wes Todd, Margo Murphy, Ken Vencile, and Abby Manahan completed the work to be taught this semester to Georges Valley High School biology students.

The curriculum adheres to the Maine Learning Results and covers four specific units of biology. A combination of inquiry based activities and academic work will strengthen students' math and science skills. Students will organize data compiled during laboratory work and reflect their ideas in their science journals.

Our commitment to students achieving success in science means we extend the classroom outside to study the rocky coastline and diversity of life found there. By mixing it up between classroom academics and outdoor research projects, students connect with the marine ecosystem while building self-confidence and developing critical thinking skills.

The class recently completed a research investigation that compared two specific marine organisms. Students collected samples, massed, measured, compiled data, and graphed the results. Based on the findings, the GVHS students were able to understand successful adaptive strategies these marine organisms made in response to each other.



Middle School Expands

Develops New Business Venture

For most, fall is the time for cutting back gardens and canning up fruits and vegetables, but here at Herring Gut our aquaponic greenhouse production is poised to grow over the next academic year.

The RSU 13 Middle School Alternative Education Program has doubled in class size and time spent at Herring Gut Learning Center. Half of the students will manage the long-standing oyster seed program, the other half of the class will create an aquaponic greenhouse start-up business selling basil, lettuce and fish they will be growing

Middle school students have operated Herring Gut's shellfish hatchery since 1999. Now a growing number of students in this program will be learning essential science, math, business and communications skills producing and marketing fish, basil and lettuce for local restaurants, food co-ops and Midcoast School of Technology's Culinary program.

We are growing here, and we mean business!



The Thomson House, Port Clyde.

Mrs. Arline Thomson

Herring Gut Remembers Friend and Neighbor...

"Mrs. Thomson loved Port Clyde and her home, here. She told me one sparkly Herring Gut morning that the view from her kitchen windows, past the ancient apple tree, down the rock wall to Syd Davis' Lobster Pound was simply the prettiest in the world. She painted it many times."

Mrs. Arline K. Thomson died on September 8, two days shy of her 98th birthday. Originally from Lawrence, MA., Mrs. Thomson and her husband, the late Robert B. Thomson, purchased their Port Clyde home in 1946, and later, the lot to the west, on which Herring Gut Learning Center now stands.

For years she divided her time between Port Clyde and Orono, where she worked for the University of Maine using her art and graphic design skills for the Department of Public Affairs and book design talents for University Press. Officially retiring in 1985, she worked on an "as needed" basis until 1994.

Mrs. Thomson devoted summers in Port Clyde to painting, visiting friends, her cat Sir Walter, harvesting berries, and enjoying the flora and fauna of the former saltwater farm she called home.

"Mrs. Thomson was interested in everything: she knew something about most things and a lot about many. She read every word of her newspaper every day and always had at least one book going."

Herring Gut is honored to call The Thomson House part of its campus and looks forward to years of hosting curious and thoughtful minds under Mrs. Thomson's roof.

Quotes from Kathleen Ross,
Herring Gut's gardener

Board News



Wendy Makins

The Herring Gut Learning Center Board welcomes **WENDY W. MAKINS**, of Washington D.C. and Cushing, ME., as a new trustee. Wendy brings years of experience serving on boards and working in collaboration with institutions focused on education, art, science, and the natural world. Trained in art history, she's a graphic and botanical artist as well as a natural science photographer.