

# Student scientists riding HI-MOES | Hawaii247.com | Hawaii 24/7



Students check out some of the displays during the science conference Tuesday, May 4 at NELHA. (Hawaii 24/7 photo by Karin Stanton)

Karin Stanton | Hawaii 24/7 Contributing Editor

The future of Hawaii's natural resources looks like it might be in good hands.

For the better part of a year, hundreds of West Hawaii middle and high school students have been studying bay and watershed ecosystems through HI-MOES (Hawaii Island Meaningful Outdoor Experiences for Students) and finally got to share the findings of their research projects last week at a science conference in Kona.

The HI-MOES program, funded through NOAA Bay Watershed Education and Training (B-WET), supports teachers with science-based outdoor learning experiences for their students. Outdoor educators from The Kohala Center and Kohala Watershed Partnership have been assisting with classroom presentations, research project choices and site selection, field trip logistics, and organizing presentations by scientists and cultural practitioners.

The young scientists represent nearly 400 students who have been studying different ecosystems in the Kohala Mountain and Kahaluu Bay ahupuaa. With their teachers, they have been answering experimental questions about topics/parameters as diverse as moss thickness, soil temperature and composition, and plants in the wet and dry forests of Kohala Mountain to tide pool species, urchin abundance coral health, and water quality in Kahaluu Bay and other comparable ocean sites on the west coast.

Stephanie Bennett, B-WET coordinator, said the students and the work they presented was inspiring.

"I'm really re-energized by how smart and enthusiastic these kids are," she said. "They are grasping concepts I only learned in college. I'm also really encouraged by how into technology they are. They showed videos they made and books they created online."

Melora Purell, Kohala Watershed Partnership coordinator and one of the outdoor educators, said the Hawaii is fortunate to have such a pool of youngsters who are dedicated to conservation and caring for their natural resources.

"There was such a diversity of projects," she said, "and they really owned them, really did the science."

Highlights of the end of year HI-MOES conference included:

\* West Hawaii Explorations Academy students studied and monitored four tide pools — two tide pools at Keahole Point near the school, the MLCD tide pool at the Old Kona Airport, and one at Kahaluu Bay. They collected and analyzed data to see if the protection provided by MLCD affects the relative health of tide pools.

\* Seventh and eighth grade students from Innovations Public Charter School designed the Puu Kawaiwai Ecological Study, answering their research question: What are the ecological differences between the wet and dry forest on Puu Kawaiwai? They measured ambient air temperature, relative humidity, soil moisture, soil temperature, soil percolation and absorption, and soil composition; collected soil samples; and surveyed the plants and animals using square meter quadrants in three different locations.

Project advisors and mentors said they were impressed with how engaged the students were with their subject matter.

“They were very supportive, very respectful of each other,” Bennett said. “They had more questions for each other and that was great to see.”

The Kohala Center will post the projects and student presentations on its website.

Participating Schools included:

#### Kona

- \* Innovations Public Charter School, Grades 5 & 6
- \* Innovations Public Charter School, Grades 7 & 8
- \* West Hawaii Explorations Academy, Grade 7
- \* West Hawaii Explorations Academy, Grade 9-12
- \* Hualalai Academy Grades, 10-11
- \* Kealakehe High School, Grades 9-12
- \* Kealakehe High School, AP Biology
- \* Kealakehe Intermediate School, Grade 7
- \* Ke Kula o Ehunuikaimalino, Grades 9-12

#### Waikoloa

- \* Waikoloa Middle School, Grade 7

#### Waimea

- \* Hawaii Preparatory Academy, Grade 7
- \* Waimea Middle School, Grade 7
- \* Parker School, Grade 7 and Grades 9-12

As part of the program, participating teachers received:

- \* Consulting support from an outdoor educator for classroom and field activities
- \* Classroom presentations during the year on bay and watershed theory and science, the scientific method, presentations from cultural practitioners and scientists working in the area
- \* Field trips to selected sites in the ahupuaa where the school is located
- \* Mini-grants to support project-related supplies and substitute teachers
- \* Assistance with implementing a hands-on, investigative research project from outdoor educators and scientists
- \* Access to curricular resources compiled to support the program
- \* Access to a Web site and blog that will facilitate information sharing between teachers and students working on the program

The outdoor educators for HI-MOES were Purell and Samantha Birch.

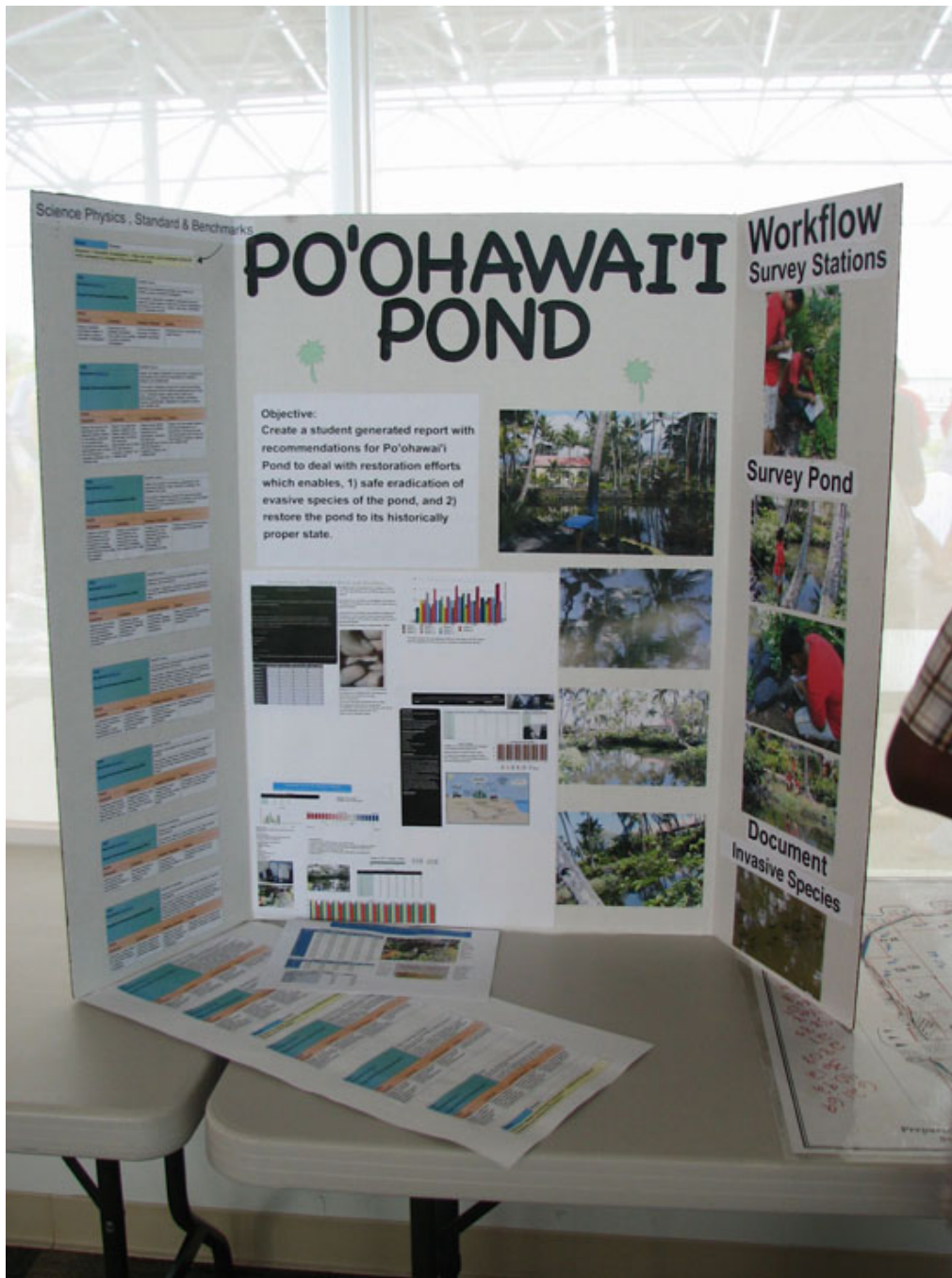
Purell holds a master's degree in tropical conservation biology, is a 16-year veteran classroom teacher for middle and high school sciences, and currently coordinates outreach and environmental education for The Kohala Watershed Partnership.

Birch, field educator for The Kohala Center, holds a master's degree in protected area management and is an

experienced marine educator who has worked with K-12 classes and special programs in marine and environmental education.

— Find out more:

[www.kohalacenter.org/himoes/schools.html](http://www.kohalacenter.org/himoes/schools.html)



A presentation on Poohawaii Pond. (Hawaii 24/7 photo by Karin Stanton)

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