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AAAS Meeting

Photo: Nancy Redfeather in her garden at Kawanui Farm. Redfeather is the Project Coordinator for the Hawai'i Island School Garden Network, which is part of a larger Kohala Center program to establish pathways to greater sustainability and security for island communities. Nancy Redfeather and Bill Berry from AAAS will present a talk on Local Food Systems at the June AAAS conference.

The 89th Annual Meeting of the American Association for the Advancement of Science (AAAS), Pacific Division, will be held here in Waimea this year, from June 15-20, on the campus of Hawaii Preparatory Academy (HPA). The theme of this year's conference is *Pacific Science in a Global Society*, and the five-day



event includes symposia, field trips to sites around the Island, and workshops, as well as public events and lectures. Proposed symposia topics include current research at Palmyra Atoll; impacts of disease on native Hawaiian species; paradise lost and... recoverable: new convergences in science and the humanities; status and conservation of Hawaiian land snails; and infectious diseases.

The public will be invited to attend free talks on local food and energy systems, as well as two or three free lectures on current topics in astronomy, geology, marine science, and/or Hawaiian culture. There will also be a teacher's workshop focusing on how to integrate project-based learning into the classroom; this workshop is open to registered conference attendees only.

"We look forward to a very successful meeting and invite members of the public to join us," says Roger Christianson, Pacific Division AAAS and meeting organizer. "For those planning to register for the meeting, advance registration runs through May 20 and offers significant discounts. On-site registration will be available for all levels of participants," promises Christianson, "including professional, professional planner/presenter, teachers K-14, students, post-docs, retired/emeritus, spouses, and unemployed people."

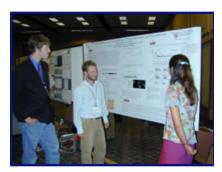


Photo: Sushan Han **(back to the camera)**, student presentation award winner at the 88th Annual Meeting of the AAAS, Pacific Division this past June 2007 in Boise, Idaho, explains her poster to other students at the meeting. The meeting attracted participants from the West Coast and several foreign countries, and included a diverse array of topics from new therapies to treat cancer, to the effects of human activities on sagebrush steppe, to materials science and nanotechnology. Photo courtesy of Roger Christianson.

Members of AAAS and its affiliated societies, students, teachers, and other scientists are encouraged to participate in the annual meeting and present oral or poster papers. The deadline for receipt of

abstracts is April 21. Application instructions, registration for the conference, and detailed information is

available on The Kohala Center's (TKC) website. TKC is helping to coordinate the upcoming conference by organizing field trips, public talks, and teacher and student activities. The Kohala Center is also available to assist presenters with forwarding their applications to AAAS; for details contact Samantha Birch at 808-887 6411. Registrants can purchase meal packages from HPA for the entire conference and/or for special events. A complete overview of the conference is available at the AAAS Pacific Division website.

Golden Opportunities

Photo: Mali'o Kodis mastering the high ropes course at BELL Rhode Island.

"My experience at BELL Rhode Island was the most amazing two weeks of my life. Being surrounded with motivated and independent students my age, while learning about our environment and my personal role in conserving it, was an amazing experience. The experience that BELL offers for environmentally conscious high school students is invaluable, and I would advise anyone who is thinking of applying to go for it!" - Mali'o Kodis, sophomore at Waiakea High School & 2007 BELL Rhode Island scholarship recipient

The search is on! The Kohala Center is seeking motivated high school students to attend one of two outstanding leadership programs this summer. Scholarships to assist with program tuition and with travel expenses are available through a partnership between The Kohala Center



and our university partners: Brown and Cornell, two of the most prestigious colleges in the nation. Selected students will travel to the East Coast, where they will join students from across the country and around the globe in residential learning programs designed specifically for high school students. The application deadline for both programs is April 9, 2008. Learn more.

Adopt a Day at Kahalu'u Bay



Photo: Vince Carr, of Presentation Services Audio Visual at the Keauhou Bay Resort and Spa, sharing reef etiquette information with a visitor.

"Our ReefTeach program is so simple that even a seven year old can help to educate visitors about reef etiquette. Now we are offering businesses and organizations within our community the opportunity to participate in taking care of our beautiful Kahalu'u Bay. The Adopt a Bay program provides an avenue for businesses to give back to their community. I ka lokahi ko kakou ka ola ai. The wellbeing of all of us is in our unity." - Cindi Punihaole, The Kohala Center's Outreach and Volunteer Coordinator

The UH Sea Grant Program estimates that Kahalu'u Bay hosts over 400,000 users a year - just during peak daylight hours. Of these visitors, about 40% sail to the Island aboard cruise ships and 60% fly in via airplane, with just a small number of local residents completing the mix. Data compiled by the ReefTeach program shows that **80%** of the visitors who don't attend a reef etiquette presentation will step and stand on coral for an average of about 300 seconds. Of the visitors who are taught by ReefTeachers, only **5%** will step on the coral, and then only for about two or three seconds as they try to keep their balance in response to wave action. This is a huge impact for an educational program, and one which promises to help preserve the delicate corals which inhabit the Bay. Learn more.

Student Congress on Sustainability

Photo: HPA students assembling one of the school's new wind turbines with Dr. Bill Wiecking as part of their ongoing alternative energy experimentation in their science classes. Photo courtesy of Dr. Wiecking.

Hawaii Preparatory Academy, a K-12 school in The Kohala Center's hometown of Waimea, will host the First Annual Student Congress on Sustainability, from June 8-11, 2008, at the HPA Upper Campus. The Kohala Center is assisting with the coordination of this event, which aligns with the Center's ongoing sustainability agenda for Hawaii Island.



Twenty-five Island high schools have been invited to send student delegates to share ideas and brainstorm about sustainable practices already in place, or in the planning stages, at their schools. The Congress will expand in 2009 to increase statewide participation, with plans to expand nationwide in 2010, and globally in 2011. The mission of the Student Congress on Sustainability is "to celebrate, inform, and cultivate student-driven environmental initiatives addressing local, national, and global issues. Through the enthusiasm, talent, and resourcefulness of young women and men, the Congress will be one means of facilitating widespread education and collaboration among high school students around the world, serving to cultivate and shape habits of mind that will translate sustainable ideology into practice."

The Congress is funded through gifts and donations from private foundations, corporations, and individuals, and HPA is offering this event free of charge to all participants. Read more about the upcoming Student Congress.

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Study at Brown or Cornell University This Summer



Photo: 2007 BELL Rhode Island scholarship recipients Kanoe Phillips (**left**), now a sophomore at Parker School, and Scott Farmer (**right**), now a junior at Kealakehe High School. This was Kanoe's and Scott's last night in Rhode Island, and they were asked to dress formally and sustainably!

"BELL Rhode Island was the best opportunity of my life, and that is no overstatement. I got to see a part of the world I wouldn't have otherwise, met other kids from all over, made one of my best friends in Kanoe, and met my longtime girlfriend. I can't even begin to explain how thankful I am for that scholarship." – Scott Farmer, 2007 BELL Rhode Island scholarship recipient

The Kohala Center is offering two scholarships to the Brown University Environmental Leadership Lab (BELL) in Rhode Island. Students select one of three sessions: *BELL Sustainable Development* from June 29 - July 11, 2008 or from July 13 - July 25, 2008, or *BELL Field Ecology* from July 27 - August 8, 2008. The BELL program is housed at Brown's Haffenreffer estate, a 372 acre historic farm property adjacent to the Narragansett Bay. Participants take a hands-on approach to evaluating human impacts on the Narragansett Bay watershed, which is among the most diverse and biologically productive ecosystems on Earth. Participants learn by doing: activities include trawling for marine organisms aboard a 45-foot research vessel, helping to design and construct a sustainable engineering project, and practicing the skills needed to make a positive difference in their home communities. For more information about the program, visit http://brown.edu/Administration/Continuing_Studies/pc/leadership/bell.php.

The deadline for BELL applications is April 9th, 2008. Please download all application materials from The Kohala Center website, or call The Kohala Center at 808-887-6411 to request application materials.

Cornell University is once again inviting Island girls to apply to the CURIE Academy, a residential program from July 20 – 26, 2008. The Kohala Center is offering up to three partial scholarships for qualified applicants to travel to and from the CURIE Academy on Cornell's campus in Ithaca, New York. The Academy attracts girls from around the world who share a strong interest in science, mathematics, and/or engineering. The CURIE Academy is hosted by Diversity Programs in Engineering at Cornell. Applicants must have at least a 3.0 grade point average (on a 4.0 scale) and must be entering their junior or senior year of high school.

CURIE Academy participants experience life on a university campus, explore some of the many fields of engineering, engage in meaningful research experiences, and learn more about Cornell University. This summer the girls will learn about the physics of light and how optical technologies can be used to probe and measure blood flow in a live person. They will learn about the physiology of the circulatory system, help to construct several different optically-based tools to image blood cells and the vascular system, and work in the lab to quantify blood flow and blood oxygenation. For more information about the CURIE Academy visit www.engineering.cornell.edu/curie.

Photo: Akela Kurahara, 2007 CURIE Academy scholarship recipient, takes a break on the lawn fronting her classroom at Cornell.

"Throughout the week-long program I was introduced to concepts and ideas that were completely new to me. I was able to attend seminars and labs along with 29 other amazing young women. The experience of creating so many new friendships, learning so much more about the vast field of engineering, and living on a college campus as pristine as Cornell will stay with me forever. The CURIE program offered me so much more than an education about engineering; it helped to broaden my horizons both as a scholar and



as an individual." - Akela Kurahara, junior at Hilo High School and 2007 CURIE Academy scholarship recipient

The deadline for CURIE Academy applications is April 9th, 2008. Please download all application materials from The Kohala Center website, or call The Kohala Center at 808-887-6411 to request application materials.

Scholarship consideration will only be given to those Hawaii Island students who apply to the BELL Rhode Island and CURIE Academy programs via The Kohala Center. Completed application materials for both programs should be mailed to The Kohala Center, P.O. Box 437462, Kamuela, HI 96743, or faxed to the Center at 808-885-6707.

Last but not least, The Kohala Center congratulates Faith Ozer, a freshman at St. Joseph High School in Hilo, and Olympia Zampathas, a freshman at Honaka'a High School, who will be attending the BELL Hawaii Program in April 2008. Faith and Olympia will spend a whirlwind week traveling around the island, learning about geology in Hawaii Volcanoes National Park, assisting with the restoration of native forests, sea kayaking and snorkeling in Kealakekua Bay, exploring Pu'u Honua o Honaunau National Historic Park, and learning about Hawaiian culture from lifelong practitioners.

"I want to change the world. I understand this may seem unrealistic in many ways, but with all of the damage being done, there should be an equal amount of appreciation for what this Earth has given us...You can build one hundred buildings, but Hawaii's natural greatness can never be replicated." – excerpt from Faith Ozer's BELL Hawaii application essay

Get on Board



Photo: Samantha Birch teaching high school students at the Foundation School at University of the Nations how to be ReefTeachers.

The **ReefTeach Adopt a Day At Kahalu`u Bay** program was launched in December 2007 to give businesses and organizations the opportunity to participate in the effort to take care of Kahalu`u Bay. The Adopt a Day program encourages employees of local businesses and members of community organizations to take responsibility for a day of ReefTeaching at the Bay. The program is flexible and any level of commitment is welcome: whether it is one day a year, or one day a week.

The first business to embrace this program was the Fair Wind. Mendy and Puhi Dant's staff have adopted the first and third Mondays of every month.

"We are very proud of our employees who have volunteered to share their knowledge and invest their time at Kahalu`u Bay. Many visitors and Island residents think it is okay to feed our reef fish green peas or cheese. The fish have natural food in their habitat, and when humans interfere, the balance of the reef gets disturbed. Leaving garbage on the beaches can strangle, choke, and poison our marine life. It is

important to work together to share the akamai (wise) way to enjoy our beautiful beaches and ocean waters, making sure people learn to respect our Island home." - Mendy and Puhi Dant, owners of the Fair Wind

In January, Clyde Pearce, General Manager of the Keauhou Bay Resort and Spa, adopted the second Wednesday of each month and committed to training all the resort's staff as ReefTeachers. Jack's Diving Locker has committed to adopting one day a month. Samantha Birch, Kohala Center Program Manager and marine science trainer, recently trained nine high school students from Foundation School at University of the Nations. These students will be adopting one day a week at Kahalu`u Bay.

The ReefTeach training consists of $1\frac{1}{2}$ hours of classroom time plus an hour of onsite training at Kahalu`u Bay, where prospective ReefTeachers learn more about the corals and other marine life inhabiting the Bay. Reference books and story boards are provided for the volunteer ReefTeachers to use, as well as a free t-shirt for each new ReefTeacher. Typical teaching hours are from 10 am to 1 pm, but the schedule is flexible to suit the availability of volunteers. All days of the week are still available. For additional information or to adopt a day at the Bay, please contact Cindi Punihaole at cpunihaole@kohalacenter.org or at 808 895-1010.

Putting Ideas into Practice

Photo: HPA students and staff have embraced the practice of recycling their beverage containers as part of the school's *Go Green* initiative.

"Over the past two years, HPA's Go Green initiatives have been supported by the hard work and commitment of students, faculty, and generous donors. We have installed six solar street lights, 21 solar-powered fans, solar water heating systems for eight faculty houses and for the swimming pool, an ozone sanitation system for the pool to reduce the use of chlorine, converted to energy-saving fixtures, and switched to using more eco-friendly products. But we are most proud of our student-driven recycling, research, and service



projects. We hope that the Student Congress will continue to elevate sustainability awareness, discussion, and collaboration amongst our Island high school students. Our goal is to have our participants bond - so they will be able to support and collaborate after they leave us." – Karen Yamasato, HPA Business Manager

Student delegates to the Congress on Sustainability will participate in workshops on solar energy, wind power, biodiesel fueled cars, electric cars, global climate change and carbon footprint calculations, sustainable eating and local food production, marine education, and organic composting, among other topics. These workshops will be hosted by HPA and West Hawaii Exploration Academy staff and by invited speakers, including local food advocate Andrea Dean, Amanda Rieux of Mala`ai: The Culinary Garden of Waimea Middle School, and Dolphin Quest. Claire Gagne, 2007 graduate of the Yale University Masters Program in Industrial Ecology and a Maui native, will discuss strategies that teachers and students can implement in their schools and communities to change the ways they use energy. Gagne contributed significantly to the Analysis and Recommendations for the Hawaii County Energy Sustainability Plan, and she spent the past year analyzing energy use on the Island in order to formulate the energy saving recommendations which are incorporated into this report.

Keynote speakers include innovative Island educator Dr. Ku Kahakalau, who will discuss the Hawaiian cultural perspective on sustainability. Derek Kurisu, Executive Vice President of KTA Super Stores, will share some historical context on the sugar plantations that formerly dominated the Island's economy, then discuss the importance of locally grown food and what Island businesses are doing to increase their market share. Alan Nakagawa, science education specialist with the DOE, will facilitate Al Gore's global warming presentation. Delegates will take an excursion to the Natural Energy Laboratory of Hawaii to visit some of the different businesses sited there, such as Kona Kampachi and Koyo Water. Student delegates will also have the opportunity to share their thoughts on sustainability with students in Alaska and in Germany, via teleconferencing.

Teachers will be invited to participate in two workshops geared specifically for them. Alan Nakagawa will discuss how to integrate sustainable projects into the school curriculum, with an eye to meeting Hawaii State standards. Dr. Suzanne Langford, Dean of Curriculum, Instruction, and Research at Saint Louis High School on Oahu and an associate professor at the School of Education at the University of Redlands in California, will host a teacher workshop on literacy and sustainability.

"Reading and writing are essential skills that students use to understand our environment and how we can take action to make a positive difference towards sustainability," says Dr. Langford. This workshop will help teachers address students' reading, including key skills and strategies that support comprehension, their enjoyment of reading, and their ability to understand the world from a sustainable perspective.

Every high school on the island has been invited to send one teacher and two to four students to the First Annual Student Congress on Sustainability. Participating students and teachers will be housed on campus at HPA, at no cost to the participants. For more information on the Congress, visit http://www.hpa.edu/gogreen/studentcongress or contact Mrs. Karen Yamasato at kyamasato@hpa.edu.

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