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IMPACT REPORT
Q1

FIRST QUARTER



Of Innovation,
Collaboration,
and Compassion



**College of Tropical Agriculture
and Human Resources**
University of Hawai'i at Mānoa

*The founding college of the
University of Hawai'i, established 1907*

www.ctahr.hawaii.edu

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College of Tropical Agriculture and Human Resources **Of Innovation, Collaboration, and Compassion**



“CTAHR, like many organizations, is utilizing these difficult times to be more creative and innovative than ever before.”

Andrew Hashimoto
Dean, CTAHR

Like the rest of the university and the state, the College of Tropical Agriculture and Human Resources (CTAHR) ushers in its new year adapting to the crippling effects of a weak economy. Unprecedented budget reductions coupled with a spike in faculty and staff retirements hamper the college’s ability to strategically manage the work we do, the services we provide, and the people we employ.

This is all very foreboding, but today’s gloomy economic condition offers a bright spot. The challenges that we face have caused us to appreciate and apply practices of sustainability within our walls. When you think about it, innovation, collaboration, and compassion are key aspects of sustainability. We’re discovering and adopting efficiencies while trying to minimize any compromise on quality.

CTAHR, like many organizations, is utilizing these difficult times to be more creative and innovative than ever before. This new quarterly format of our Impact Report is an example of this. It essentially achieves the same objective as the old 20-page annual report format, but at less cost, and it allows us the opportunity to communicate to our audiences with more frequency and in smaller bites.

The stories shared in this report also reflect how our faculty and staff apply innovation, collaboration, and compassion to meet the needs of our constituencies during these very challenging times. The stories are also examples of how we fulfill the education, outreach, and research missions of the college.

As we enter this new decade, CTAHR will remain vigilant to recognize the wants and needs of those we serve. While reassessing our strategic initiatives, we will move forward in a sustainable manner, and with intention.

Aloha,

A handwritten signature in green ink that reads "A. G. Hashimoto". The signature is fluid and cursive, written in a professional style.

Andrew G. Hashimoto
Dean/Director

The mighty fight against the varroa mite

Here's a fact that's food for thought: Without honeybees, the plant world would produce about a third less food than it does. The adept, efficient pollination services honeybees provide are a wonder of nature, an indispensable element in the evolutionary biology of higher plants.

Until recently, Hawai'i was free of the most serious honeybee pests. This allowed the islands to host a significant queen bee production industry, exporting healthy queens to places around the world where they were needed to support bee husbandry... as well as the agriculture that depends on it. So it caused great concern two years ago when the varroa mite—one of the greatest dangers to honeybees—was discovered on O'ahu, causing massive bee colony losses and auguring potential risks to bee-dependent crops like melons and lychee, to name only two. The varroa mite invasion then moved to the Big Island, causing distress among queen bee producers, farmers of crops such as macadamia nuts and coffee, and honey producers.

Two CTAHR researchers, Mark Wright and Ethel Villalobos, set out to find methods to control the scourge of the varroa mite parasites, which transmit viruses to bees. With Hawai'i Department of Agriculture funding, they launched an all-out, statewide effort to save Hawai'i's honeybees. They initially concentrated on preventing movement of the mites from O'ahu to Kaua'i and Maui; now the scope has broadened to research on managing the ubiquitous pest and limiting its threat to our bees.

One technique they developed traps varroa mites in the drone brood, the part of the colony that male bees inhabit. By removing infested drone brood traps from hives, the mite population can be suppressed. Another significant breakthrough was registration of a new formulation of formic acid that proved to be highly effective against the mites. The treatment is quick, safe, and effective, and it likely will be approved for organic honey production.

Wright and Villalobos, and others in the CTAHR research group, continue to study mite population dynamics, determine safe thresholds for mite populations in hives, and learn more about how bees pollinate various crops. A partnership with researchers at Sheffield University in the United Kingdom is also being developed. For more information on CTAHR's efforts to save Hawai'i's bees, see www.ctahr.hawaii.edu/wrightm/Honey_Bee_Home.html.



Varroa mite (circled) on a honeybee drone.

Photo: Ethel Villalobos

Photo: Scott Nikaïdo



From Hawai‘i to Alaska: One student’s summer to remember

Some of the most valuable and enduring student learning experiences happen outside the classroom, sometimes outside the state. Tropical Plant and Soil Sciences undergraduate Robert Morgan can attest to that. Thanks to CTAHR and a partner institution, the University of Alaska at Fairbanks, Morgan enjoyed a memorable summer on Alaska’s Nunivak Island. Funded by a USDA-NIFA Alaska Native-Serving and Native Hawaiian-Serving Institutions Grant, he earned university credits while enjoying an unforgettable time.

It started with a two-day voyage from Honolulu and a day’s orientation in Bethel, Alaska. After a flight to Mekoryuk, Nunivak Island, and a boat ride on the Bering Sea, Morgan found himself in Nash Harbor, Nunivak Island, one of the earliest settlements of Alaska’s Nuniwarmiut people. The UA Fairbanks course began with a daily lecture emphasizing the native flora of Alaska. Every day was an ethnobotanical adventure!

At a picturesque training camp where a river spilled into a protected bay, Morgan learned some of the essentials of Alaskan culture and life, including hiking techniques, food preparation, basket weaving, and fishing. “The camp’s accommodations were very comfortable and close to nature, with semi-permanent Weatherport tents for lodging, a separate kitchen tent, a teaching tent with Internet connection, two maqii (traditional steam baths), and stylish outhouses,” Morgan recalled.

The curriculum was intense, and the advantage of living on the tundra and collecting plant specimens daily helped Morgan get a good idea of what a botanist’s career would be like. He reports spotting an amazing range of wildlife—more than 80 species of migratory sea birds, foxes hunting, and reindeer and muskoxen roaming and grazing. A far cry from Hawai‘i!

“Mahalo to CTAHR, in affiliation with USDA, for sending UH Mānoa students around the world to witness such amazing flora and fauna in their natural, undisturbed habitats,” says Morgan. “This was the most exciting scholarship ‘field trip’ to date, not to mention all of the great friends and acquaintances that I now have.” For more information on the Alaska Native-Serving and Native Hawaiian-Serving Institutions Education Grants, see www.ctahr.hawaii.edu/agincubator.



CTAHR student Robert Morgan flashes a “shaka” from the frozen tundra of Nunivak Island, Alaska.

Helping to strengthen the loving bonds of 'ohana

In Hawai'i, strong family ties play an essential role in people's health and well-being, but they are sometimes tested when round-the-clock caregiving becomes necessary. According to the National Family Caregivers' Alliance, in our state more than 100,000 family members take care of older relatives. Also, grandparents raising grandchildren (GRGs) are very common in Hawai'i. The 2000 U.S. Census of the islands found over 14,000 grandparents having sole responsibility for raising their grandchildren.

In 2008, in response to the growing number of caregivers in Hawai'i, CTAHR's Family and Consumer Sciences assistant professor Lori Yancura developed an outreach project called 'Ohana Caregivers. Project members conduct research on and provide education to all types of family caregivers throughout the state, with the goal of improving their health, circumstances, and quality of life.

One of the projects, for example, resulted in two brochures conveying information on how to manage stress, cope with additions to the family, understand

children's problem behaviors, and locate community resources. This is particularly useful information for GRGs,

who may face challenges such as dealing with their grandkeikis' emotional and behavioral problems, overcoming financial difficulties, and negotiating the legal entanglements associated with seeking and maintaining custody.

Another project for caregivers of older adults was funded by the Senior Medical Patrol program (formerly SageWatch), under the auspices of the Hawai'i Department of Health's Executive Office on Aging. Co-investigators Yancura and Pamela Kutara, extension educator, used an intergenerational approach to plan, develop, and disseminate educational materials to help family caregivers recognize and prevent health-care fraud, waste, and abuse. A series of five educational videos was created, aired on 'Ōlelo television, and disseminated as DVDs.

More information on 'Ohana Caregivers projects and resources are available online at www.hawaii.edu/ohanacaregivers.

Pamela Kutara and Lori Yancura at the Hawai'i Caregiver's Conference.

'Ohana Caregivers



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