



SPRING 2023 EDITION

UNIVERSITY OF HAWAII AT HILO
TROPICAL CONSERVATION BIOLOGY
& ENVIRONMENTAL SCIENCE



A Splendid Spring!

TCBES Semesterly Newsletter

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UH Hilo TCBES Professional Internship Presentation Day, May 4th

Pictured (left to right): David Russell, David Girbino, Cienna-Lei Daog, Avalon Paradea, Alejandro Caamaño Barrientos, Mikayla Barnwell, Hannah Hartmann, & Lucy Chalgren

Scenes from the TCBES Symposium:

INSIDE THIS ISSUE:

- Annual TCBES Symposium
- Student and Faculty Highlights
- In The News
- Graduating class of Spring 2023



STUDENT & FACULTY

Highlights

Congratulations!

TCBES Symposium Winners

Best 5 minute talk:

1st place: Brianna Ninomoto, "Rising coastlines: The future impact of sea level rise"

Honorable mention: Konapiliahi Dancil, "Developing Climate Resilient Restoration Techniques for Hawai'i's Lowland Wet Forests"

Best 10 minute talk:

1st place: Avalon Paradea, "Kuku Kapa and Pilina 'Āina: Barkcloth-making and Relationships with Nature"

Honorable mention: Amanda Navine, "Advancing Endangered Hawaiian Bird Species Monitoring Using Bioacoustics and Machine Learning"

Best poster:

1st place: Lilly Thomey, "To Know, You Gotta Go: Surveys for Maui Nui Land Snail Species, Habitats, and Their Conservation Status"

Honorable mention: Sydney Lyn Lewis, "Into the Wormhole: Assessing associations between Christmas tree worms (*Spirobranchus corniculatus*) and coral health conditions"



[View the Symposium Presentations on the TCBES YouTube Channel](#)

November 2022:

Pacific Island Climate Adaptation Science Center (CASC) and UH Marine Science Department host Alaska CASC scientists in Hawai'i to find common ground on climate change.

[Read the article here.](#)



December 2022:

Recent TCBES graduate **Hannah Hartmann** helped organize Walk for Wai with Hawai'i Sierra Club in partnership with 'Oahu Water Protectors. The demonstration raised awareness about the Red Hill crisis and demanded defueling of the facility.

January 2023:

TCBES alumnus **Jeff Stallman** discusses his work on mushrooms and the theory of island biogeography in an ECR feature.

[Read the article here.](#)



February 2023:

TCBES Faculty **Margary Martin** receives tenure at UH Hilo's School of Education.

[Read the article here.](#)



March 2023:

UH Hilo Researchers, TCBES alumni, and a MARE alumnus investigate the impact of sewage pollution on reefs explored by UH researchers.

[Read the article here.](#)

March 2023:

Researchers, led by TCBES faculty **Tim Grabowski**, examine pandemic-driven changes in fishery use on Hawai'i Island.

[Read the article here.](#)



More TCBES News



Piles of hundreds of harvested Kalo

AGROFOREST COMMUNITY WORKDAYS

TCBES graduate student **David Girbino** in partnership with OK Farms and the Hawai'i Ulu Coop has been hosting monthly community workdays at a 5-acre agroforest. On a planting day in March 2023, over 30 volunteers attended to harvest kalo, harvesting over 600 lbs of corm and 200 lbs of leaf. They also harvested over 2,000 keiki for replanting. Volunteers all went home with corm, leaf, and keiki to enjoy the fruits of their labors after a day of connecting with the 'āina. Community workdays are typically the last Saturday of each month. Sign up [here](#) if you are interested in participating.

HUMPBACK WHALE RESEARCH HIGHLIGHTED IN INTERNATIONAL FILM FESTIVAL

Adam Pack, Chair and Professor of Psychology, had his collaborative research on humpback whales and climate change, which appears in the PBS South Florida documentary film, "Vanishing Whales," featured at the 2023 International Ocean Film Festival in April in San Francisco, CA. The findings of Pack and his collaborators, Drs. Joseph Mobley, Mark Deakos and Guilherme Bortolotto, were recently published in the paper, "Aerial survey perspectives on humpback whale resiliency in Maui Nui, Hawai'i, in the face of an unprecedented North Pacific marine warming event," in the journal Marine Mammal Science.



Ku'ulei Keakealani delivers an inspiring keynote

KAIAMEAOLA CLUB HOSTS TCBES SYMPOSIUM

The 13th Annual TCBES Symposium was held on March 30 and 31 with the theme of "Restoring Relationships, Mauka to Makai". The keynote speakers, Ku'ulei Keakealani, Cultural Director of Hui Aloha Kiholo and Jen Lawson, Executive Director of Waikōloa Dry Forest Initiative, gave inspiring talks on cultivating pilina in a number of different contexts. The days were filled with presentations on them many groundbreaking projects being conducted within our community. If you would like to view the presentations, please visit the [TCBES YouTube](#) site.

CORAL RESTORATION ON ST. CROIX

In February of 2023, TCBES graduate student **Mikayla Barnwell** traveled to St. Croix in the U.S Virgin Islands to work with The Nature Conservancy's USVI team for a week long coral restoration learning exchange. She helped them outplant over 1000 fragments of Staghorn coral as well as do some basic husbandry and micro fragmentation at their on land coral nursery.



Mikayla Barnwell diving in St. Croix

Congratulations Graduating students!

Mikayla Barnwell

« Developing place-based coral restoration in West Hawai'i: A guide to planning and implementation »

Mentor & Organization: Julia Rose, The Nature Conservancy, Hawai'i and Palmyra

Alejandro Caamaño Barrientos

« Implementing sustainable methods for seafood production with Blue Ocean Mariculture »

Mentor & Organization: Federico Rotman, Blue Ocean Mariculture

Lucy Chalgren

« Place-based science communication methods in Hawai'i: Social media to student curriculum »

Mentors & Organizations: Anya Tagawa, 'Imiloa Astronomy Center of Hawai'i, & Dr. Katie Abrams, Colorado State University

Cienna-Lei Ku'ulileialohaiwili'ia Daog

« Evaluating the native fish species of Āhole (*Kuhlia xenura*) as a substitute for introduced species in aquaculture »

Mentor & Organization: Luke "Nalu" Mead, Trisha Olayon, & Cybil Maikalani Glendon-Bacilig, Kumuola Marine Science Education Center

Hannah Hartmann

« Aligning with fungi to heal the 'āina and huli the system »

Mentor & Organization: Wayne Tanaka, Sierra Club of Hawai'i, & Maki Morinoue, HuliPAC

David Girbino

« As above, so below: Envisioning food forestry and indigenous microorganism networks as foundations of Hawaiian food sovereignty »

Mentors & Organizations: Aja Grande, Pahoehoe LLC; Kyle Jackson & Dana Shapiro, The Hawai'i 'Ulu Cooperative; & Susan Schultz, Ancient Leaf Tea.

Stephanie Mladinich

« Pockets and pathways to invasion: Developing improved mosquito monitoring methods in high elevation forests on Hawai'i Island »

Thesis Advisor: Patrick Hart

Avalon Dawn Paradea

« Nā Pilina 'Āina: Relationships between the communities and environments of Kohala Hema, Kona 'Akau, and beyond »

Mentors & Organizations: Lauren Kurpita, The Nature Conservancy, Hawai'i and Palmyra; Jill Wagner, Joseph Rock Arboretum; & Dr. Kathryn Besio, UH Hilo

Missed a Defense or Presentation?

No worries!

All completed defenses
are on the
TCBES YouTube channel
& the Spring 2023
presentations are
comming soon!



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them
here!***

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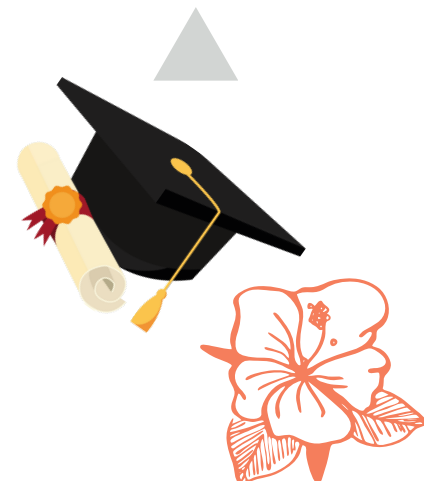
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Graduating students continued

Casey Anuheia Robins

« 'O Ke Kahua Ma Mua, Ma Hope Ke Kūkulu: Investigating the relationship between the functional traits of leaf litter and litter-dwelling arthropods »

Thesis Advisor: Becky Ostertag

David M. K. Russell

« Understanding plants of the past to inform community reforestation efforts in the future: A place-based approach for promoting resilience in the Pu'uwa'awa'a community-based subsistence forest area, North Kona, Hawai'i »

Mentors & Organizations: Jonathan Price, UH Hilo, & Christian Giardina, USDA Forest Service, Pacific Southwest Research Station Institute of Pacific Islands Forestry

News From Other Departments

STUDENTS PRESENT RESEARCH AT STANFORD UNIVERSITY SEAFARING WORKSHOP

In January 2023, UH Hilo anthropologist Joe Genz brought three students to Stanford University for a workshop on seafaring. There, the students presented their research on the oral histories of Marshallese and Yapese voyaging.

Read the article [here](#).

NEW COURSE TEACHES KULEANA AND THE IMPORTANCE OF COMMUNITY

A new Interdisciplinary Studies class encourages students to deepen their pilina (relationships) with the Hilo community. Students learn about Hawai'i through mālama 'āina activities and by exploring wahi pana (storied places).

Learn more about the class [here](#).

PHARMACY STUDENTS PRESENT NANOTECHNOLOGY RESEARCH

Three students presented their research on using nanotechnology to investigate antibacterial activity of poha berry extract at a statewide symposium in April.

Read more [here](#).

