



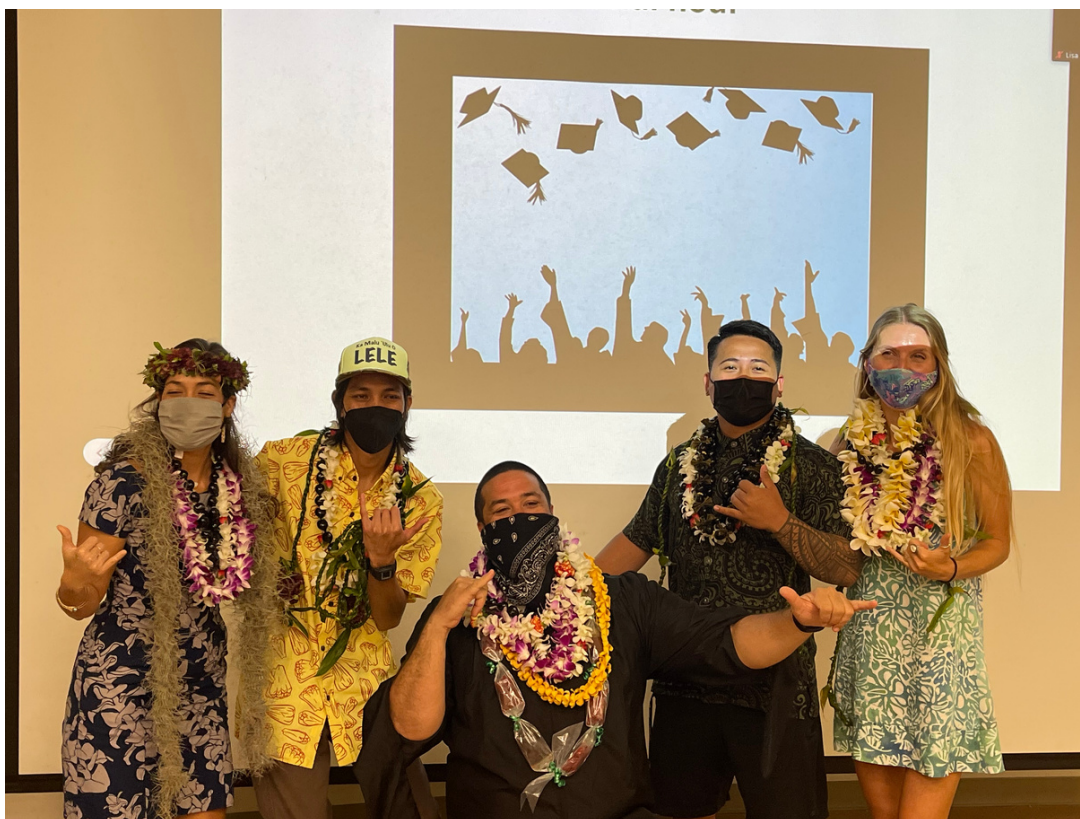
SPRING 2022 EDITION

UNIVERSITY OF HAWAII AT HILO  
TROPICAL CONSERVATION BIOLOGY  
& ENVIRONMENTAL SCIENCE



# Spring Successes!

*Tropical Conservation Biology & Environmental Science Semesterly Newsletter*



TCBES Spring 2022 graduates celebrating at hybrid graduation ceremony

Pictured (left to right): Aloha Kapono, Kainalu Steward, Kimo Melcher, Kimsy Kubo, and Jessica Glazner

## INSIDE THIS ISSUE:

- Student and Faculty Highlights
- Graduating class of Spring 2022
- 2022 Symposium Recap
- In The News
- News From Other Departments

It has been a semester of groundbreaking research, impressive student and faculty achievements, and exceptional collaborations. Read all about it in this semester's TCBES Newsletter!

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## TCBES 2022 Symposium

HIGHLIGHTS FROM THIS YEAR'S SYMPOSIUM ON PG.4

# STUDENT & FACULTY

## Highlights

### Congratulations!

Jeff Stallman & Kyra Robinson



Jeff Stallman, recent TCBES graduate and current PhD student in fungal biology at Purdue University, along with Kyra Robinson, a recent UH Hilo undergraduate and Don Hemmes Award winner, recently co-authored a [paper in \*Frontiers in Fungal Biology\*](#) entitled, "Importance of Seasonal Variation in Hawaiian Mushroom (Agaricomycetes) Basidiomata Production for Biodiversity Discovery and Conservation". The paper documents seasonal variation in Agaricomycete richness and abundance to help improve future surveying efforts.

Dr. Matthew Knope



Matthew Knope, a groundbreaking evolutionary ecologist and TCBES faculty, recently received tenure at UH Hilo. Dr. Knope specializes in the speciation and extinction of plants and animals both in Hawai'i and across the world; he has made remarkable contributions to his field.

[More on Dr. Knope's Work](#)



TCBES student Kainalu Steward was recognized as a finalist for Esri 2021 Storytellers of the Year for his StoryMap, "Beyond Science Into Pō".  
[Esri page featuring Kainalu's StoryMap](#)

UH Hilo LOHE Lab hosts a coding competition with Cornell Lab of Ornithology and Google Bioacoustic Group to develop a song-detection algorithm for Hawaiian birds

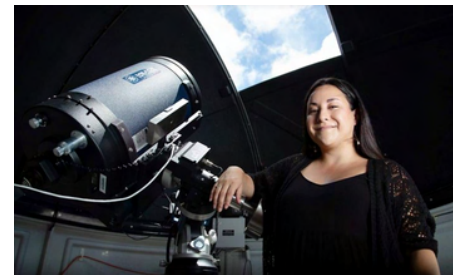
[Article on BirdCLEF2022 Competition](#)



TCBES alum, Whitney Aragaki, nominated for 2022 National Teacher of the Year  
[Article on Nomination](#)

TCBES alum, Vanessa Zepeda, featured on *Careers in STEM* cover for inspiring students to pursue STEM fields while pursuing PhD in astrobiology at Queensland University of Technology

[Article on Vanessa's work](#)



TCBES faculty co-author paper on the political language of restoration ecology, combining forestry, biology, and philosophy

[Publication in \*Frontiers in Ecology and Evolution\*](#)

Sources of pollution in West Hawai'i waters identified by UH Hilo researchers

[Article on their research](#)



# *Congratulations* Graduating Students!

## **David J. Arakawa**

« Native seabird rehabilitation with the Hawai'i Wildlife Center »

*Hawai'i Wildlife Center*

Advisor: Lisa Canale

## **Tearina G. Asiata**

« Epidemiology of mosquito-borne diseases in American Samoa »

*American Samoa Department of Health*

Advisor: Lisa Canale

## **Trevor Bak**

« A global ecological signal of extinction risk in marine ray-finned fishes »

Advisor: Matthew Knope

## **Jessica Glazner**

« Lessons from Palmyra: An interdisciplinary approach to Hawaiian coral reef conservation »

*The Nature Conservancy Hawai'i and Palmyra*

Advisor: Lisa Canale

## **Robert Justice III**

« Identifying the relationship between vocal repertoire, age, and social interactions in the 'Alalā »

Advisor: Patrick Hart

## **Aloha Kaponu**

« Chasing coastlines- Collecting historical air photos and up-to-date aerial imagery of coastal areas of Hilo and Kona districts on the Moku of Hawai'i »

*UH Hilo Spatial Data Analysis and Visualization Lab*

Advisor: Lisa Canale

## **Sean A. Kirkpatrick**

« Post border biosecurity efforts in Hawai'i: Forest pathology »

*U.S. Forest Service Research Ecologist with the Institute of Pacific Islands Forestry*

Advisor: Lisa Canale

## **Kimsky Kubo**

« Micronesian boy meets Polynesian land »

*Mauna Kea Forest Restoration Project, Department of Land & Natural Resources*

Advisor: Lisa Canale

## **Richard Masse**

« Characterizing the life history and recreational fishery of Nabeta, *Iniistius pavo*, in Hawai'i »

Advisor: Kevin D. Hopkins

## **Kimo Melcher**

« Locating ideal placement for erosion control practices using remote sensing and geographic information systems: a case study in Keawanui, Moloka'i »

*Ola Design Group*

Advisor: Lisa Canale

## **Kainalu Steward**

« Beyond science into Pō: Reevaluating the vulnerability of Lalo in Papahānaumokuākea »

*Multiscale Environmental Graphical Analysis (MEGA) Lab at UH Hilo*

Advisor: Lisa Canale

## **Rebecca Ward**

« Spatial variation in sea surface temperature (SST) and antecedent SST conditions influence community structure in the Hawaiian intertidal »

Advisor: Matthew Knope



[Watch the  
Spring 2022  
Graduation  
Ceremony](#)

## *Missed a Defense or Presentation?*

**No worries!**

All completed defenses

are on the [TCBES](#)

[YouTube Page!](#)



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*TCBES's UH Foundation*

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# TCBES 2022 Symposium Recap

On April 28th to 29th, the TCBES Kiameaola Club in partnership with the Lā Honua (Earth Day) committee presented the 12th Annual TCBES Symposium.

This year's theme was "I ulu no ka lālā i ke kumu", which translates to "The branches grow because of the trunk". The Symposium featured two remarkable keynote speakers. On the first day, Dr. Manu Aluli Meyer gave a moving talk entitled "I ulu nō lālā i ke kumu - I am because of you" on her agroforestry work with niu (coconuts) and how the 'āina may teach and inspire us. In Lokelani Brandt's incredible keynote, "Pa'a mua ke aloha: Lessons for a productive future as told in the Legend of Uweuwelekehau," she shared Hawaiian mo'olelo and how mo'olelo may be incorporated into present conservation efforts. These wonderful keynote addresses set the stage for two days full of students and faculty sharing their knowledge and conservation work and learning from one another. There was an additional featured presentation by Patrick Hart and Taupōuri Tangarō on the relationship between bird song and Hawaiian mele and oli. The symposium concluded with a workday at the Kumuola Marine Science Education Center Loko i'a in which volunteers removed invasive California Grass from the fishpond. Mahalo to all of our wonderful presenters and everyone who joined us for this year's Symposium. If you missed a presentation or wish to re-watch any part of the Symposium, the recordings can be found on the [TCBES YouTube channel](#).



**Top:** Dr. Manu Aluli Meyer  
**Bottom:** Lokelani Brandt



[Watch the 2022  
TCBES Symposium  
Recordings Here](#)



Volunteers and staff in the fishpond removing California Grass at the Kumuola Marine Science Education Center Loko i'a workday



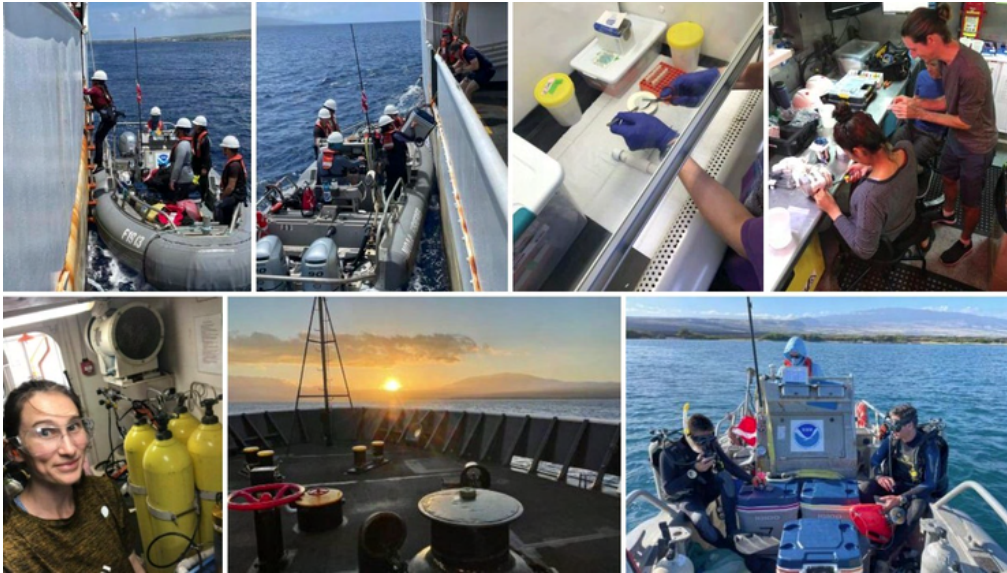
Volunteers standing next to giant pile of removed grass  
Pictured (left to right): Alex Spengler, Noah Hunt, Emma Stierhoff, Erika Kekiwi, & Stephanie Mladinich

# In The News...

## STATE SENATE PASSES BILL BANNING PRODUCTS WITH PLASTIC MICROBEADS

*Thanks to efforts from TCBES Alumnus Megan Lamson and MARE Alumnus Nic Storie, the Hawai'i State Legislature recently passed Senate Bill 2290, prohibiting the manufacture of products containing plastic microbeads. Microbeads, which are included as exfoliating agents in many personal care products, are easily released into local waterways where they negatively impact wildlife. This bill is a key step in fighting plastic pollution in Hawai'i.*

[\*\*Hawai'i Tribune Herald Article on the Bill\*\*](#)



Images from the two-week NOAA expedition in which UH researchers surveyed coral reefs using integrated methods, the first time such combined approaches have been used at this scale in Hawai'i

## UH HILO MARINE SCIENTISTS CONDUCT UNPRECEDENTED RESEARCH ON REEF ECOSYSTEMS ALONG HAWAI'I ISLAND'S WEST COAST

**Featuring: Dr. John Burns and the MEGA Lab**

*"Faculty and student researchers from the University of Hawai'i at Hilo participated in a recent ocean expedition headed by the National Oceanic and Atmospheric Administration. The researchers, who in April launched the two-week trip from O'ahu aboard the NOAA ship Oscar Elton Sette, studied coral reef biodiversity all along the west coast of Hawai'i Island"*

[\*\*Learn more about the expedition\*\*](#)

## UH HILO GEOLOGY PROFESSOR, STEVE LUNDBLAD, EXPLAINS RECENT COLLAPSE OF OLDER SEA CLIFF

[\*\*News story on cliff collapse\*\*](#)

# News From Other Departments

**UH Students recognized by NSF for their research on Native Hawaiian and Pacific Islander undergraduate students in STEM**

[Article on this award](#)



Students present poster on STEM journeys of Pacific Islander students at the Louis Stokes Midwest Regional Center for Excellence conference

**Pacific Island Climate Adaptation Science Center (PI-CASC) students present climate science research in Guam**

Students from UH Mānoa, UH Hilo, and University of Guam came together in Guam this April to discuss forest restoration and management and the impact of climate change on wildlife and ecosystems.

[Article on PI-CASC Research Symposium](#)



PI-CASC students and staff by the ocean in Guam following the PI-CASC Student Research Symposium



Jake Rodrique, the Academic Support Specialist for UHH CAFNRM, harvesting seed cane

**UH Hilo College of agriculture launches Applied life-science academy: knowledge advancing industry (ALAKA'I)**

*The new program aims to prepare students for jobs in the bioeconomy and spur the development of climate change solutions*

[More information on the ALAKA'I Program](#)

**Paper published on the genetics behind animals' innate magnetic sense**

*A team led by Renee Bellinger, UH Hilo adjunct professor, shows how magnetite in the noses of salmon has evolved to help them navigate*

[Publication in Proceedings of the National Academy of Sciences](#)



Renee Bellinger conducting work in the lab