



TCBES SYMPOSIUM

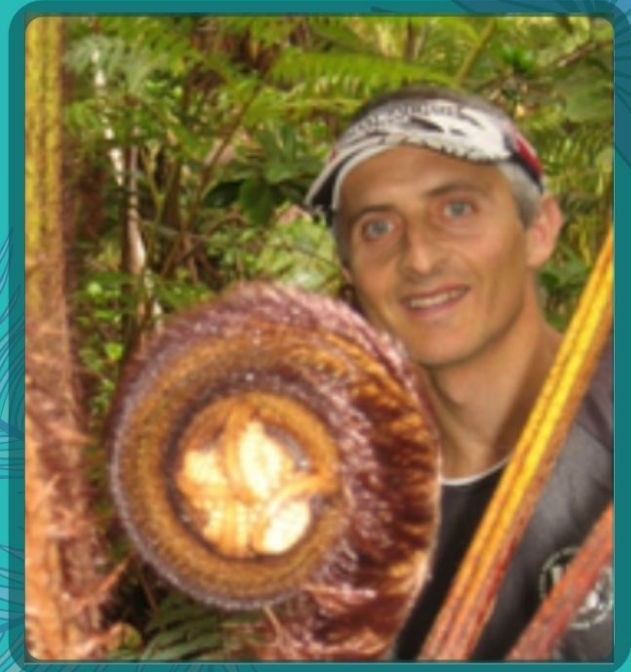
Biocultural Stewardship

15-16 April 2020 • 9AM - 3PM • Virtual

MEET OUR KEYNOTE

CHRISTIAN GIARDINA

"Engaging history and embracing sacredness: an agency perspective on cultivating biocultural stewardship"



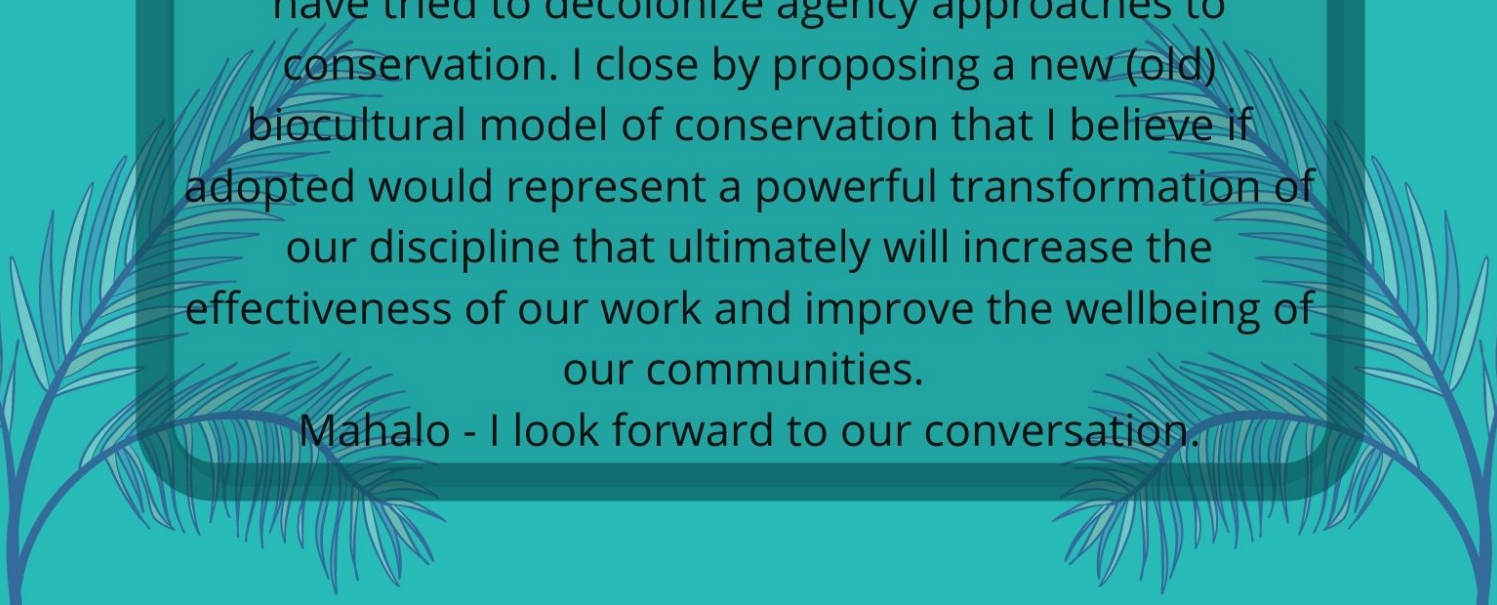
Christian studied Zoology and Political Science at Duke University (BS, 1987). Following three years of urban focused work with homeless youth in NYC and Denver, he pursued Justice Studies at the Iliff School of Theology (MAR, 1993) with thesis work on Indigenous Autonomy in eastern Nicaragua. Ever the student, he studied soil biology, forest management and global change at Colorado State University (MS, 1996) and the University of Denver (PHD, 1999). Following a post-doc at UHM studying forest carbon and climate change, he joined the USDA Forest Service where he studied forest responses to global change, restoration of ecosystem processes, and the reintegration of an ethic of sacredness into resource management. He currently supports state efforts to achieve carbon neutrality under global change and community based stewardship.

MESSAGE FROM CHRISTIAN



Aloha members of the TCBES community. I'll start by sharing that this talk represents personal work very much in progress. And so the following description places a greater emphasis on proposals than conclusions. The past decade has seen important work on the history of conservation biology - work that has challenged the dominant perspectives shaping the foundations of this complex discipline. As a result, we researchers and practitioners find ourselves at an important cross road - do we continue to disregard legacies of racial and colonial injustice? Or do we engage and reconcile these legacies, and in the process fundamentally transform how we view our places and our charge as stewards. In this talk, I hope to summarize conservation biology's history, identify critical disciplinary developments, and share how I have tried to decolonize agency approaches to conservation. I close by proposing a new (old) biocultural model of conservation that I believe if adopted would represent a powerful transformation of our discipline that ultimately will increase the effectiveness of our work and improve the wellbeing of our communities.

Mahalo - I look forward to our conversation.



THURSDAY, APRIL 15TH 2021

- 9:00 - 9:30** Kīpaepae Welcoming Ceremony & Opening Remarks
9:30 - 10:15 Keynote Speaker: **Christian Giardina** - Institute of Pacific Islands Forestry, USDA Forest Service
10:15 - 10:30 Questions
10:30 - 11:15 Keynote Talk Story

FIRST SESSION 11:00 - 12:15

- 11:20** **Ryan Perroy**
Detecting Suspect Rapid 'Ōhi'a Death Trees Via High-Resolution Visible Imagery
- 11:38** **Andre Nguyen**
Using bioacoustics to measure 'I'iwi density at Hakalau Forest National Wildlife Refuge
- 11:46** **Bobbie Suarez**
Incorporating Detection and Occupancy Coefficients of Pacific Islands Coral Reef Fishes into Biomass Estimation Procedures Indicates Biases of Current Methodology
- 12:04** **Michael Stone**
Assessing the Brand Name Marine Debris Pollution from Southeastern Shores of Hawai'i Island
- 12:12** **Anuheia Robins**
Linking Plant Litter and Litter-Dwelling Arthropod Functional Traits to Predict Ecological Interactions
- 12:20** **Trevor Bak**
A Global Signature of Extinction Risk in Marine Fishes

LUNCH 12:30 - 1:30

THURSDAY, APRIL 15TH 2021

SECOND SESSION 1:00 - 3:00

- 1:30 Nikola Rodriguez**
How Will Mass Bleaching Events Affect the Prevalence of Ciguatera on Hawaiian Reefs
- 1:38 Mari-Vaughn V. Johnson**
The Pacific Islands Climate Adaptation Science Center (PICASC)
- 1:56 Kyra Robinson**
Natural History & Biogeography of Hawaiian Fungi
- 2:14 Joseph Nakoa III**
A Multi-Indicator Approach to Identify Sewage Hotspots Along the Hilo, Hawai'i Coastline
- 2:22 Alexander Spengler**
MEGA Lab AR - A Coral Reef in your Pocket
- 2:30 Alexa Runyan**
Automating Urchin Detection on High-Resolution Benthic Imagery using Machine Learning Techniques

CLOSING REMARKS 2:45 - 3:00

FRIDAY, APRIL 16TH 2021

KUAHU WORKSHOP

Presented by Hālau 'Ōhi'a



9:15AM - 10:15AM

This workshop will take place in a separate Zoom room.

Link will be provided the morning of the webinar.

Please be prompt. Participants must join by 9:15 AM to be let in.

This interactive workshop is designed as a bridge between the two days of the symposium to enhance our learning of biocultural stewardship and guide our intentions for the day.

Learners from Hālau 'Ōhi'a Hawai'i Stewardship Training program will lead participants in Kuahu, a Hawai'i cultural practice that supports and strengthens our relationships with our natural environment.

Everyone is welcome to join. We will orient everyone before the session, so don't be intimidated or nervous about inexperience with Hawaiian culture.



FRIDAY, APRIL 16TH 2021

9:00 - 9:15 Opening Remarks

9:15 - 10:15 Kuaha Building Workshop

FIRST SESSION 10:30 - 12:00

10:30 **Tracy Wiegner**

Identifying Locations of Sewage Pollution Within a Hawaiian Watershed for Coastal Water Quality Management Actions

10:48 **Danielle Bartz**

The History of Hammerheads in Hilo

10:56 **Jordan Hemmerly**

Comparison of Quantification Methods Used To Measure Success of Scleractinian Coral Populations at Papahānaumokuākea Marine National Monument

11:04 **Sebastian A.W. Wells**

Expanding the Capacity for the Preservation and Restoration of Native Forest Habitats on the Island of Hawaii

11:22 **Kainalu Steward**

Collaborative Efforts to Reevaluate the Vulnerability of Lalo in Papahānaumokuākea

11:30 **Sofia Ferreria**

Automating Coral Species Segmentation and Classification from High Resolution Coral Reef Imagery

11:48 **Lily Gavagan**

Analyzing and Mapping Cultural Significant Sites on the Island of Kaho'olawe

11:56 **Sarah Jeanne Norrbom**

Looking at the Whole Picture for Estuary Restoration

LUNCH 12:05- 1:00

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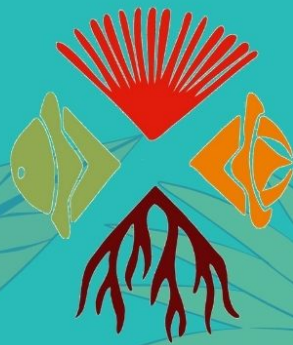
SECOND SESSION 1:00 - 3:00

- 1:00 Tim Grabowski**
Patterns of Morphological Variation in an Introduced Population of Peacock Grouper *Cephalopholis argus* around Hawai'i Island
- 1:18 Keilani Bonis-Ericksen**
Identifying Patterns in Demography, Community Composition, and 3D Structural Complexity on Coral Reefs in the Papahānaumokuākea Marine National Monument
- 1:26 Amanda Navine**
Avian Malaria and the Gut Microbiome in Hawaiian Honeycreepers
- 1:44 Olivia Jarvis**
Quantifying the Extent of Weather Buoy Damage to Coral Reefs at Lisianski Atoll in the Northwestern Hawaiian Island
- 1:52 Carson Green & Rachel Willard**
Down to Digitize: Tracking Vitality of Corals in the Northwestern Hawaiian Islands through Geospatial Software
- 2:10 Jessica Glazner**
Unlocking Resilience Drivers to Inform Pacific Coral Reef Management
- 2:18 Danielle Wilde**
Effects of *Chondria tumulosa* on the 3D Habitat Complexity of Reefs on Pearl and Hermes Atoll
- 2:36 Shane Murphy**
Comparison of Photochemical Efficiency Among Hawaiian Coral Species Housed in a Closed-System Aquarium

CLOSING REMARKS 2:55 - 3:00

We would like to thank all who were involved in making this year's virtual symposium possible!

Mahalo to Kīpuka and Kumu Kekoa Harmon for leading our opening Kīpaepae. Mahalo Christian Giardina for serving as the Keynote speaker. Mahalo to Kekuhi Kealiikanakaoleohaililani, Kainana Francisco, Aimee Sato, and the entire Hālau 'Ōhi'a team for designing and leading the Kuahu workshop. Mahalo TCBES faculty for your assistance during planning. And mahalo to all of our wonderful presenters for sharing your work and inspiring us during this symposium!



Event Coordinators - Carmelita Villalobos, Lisa Mason, and Jordyn Anderson

Advising - Rebecca Ostertag