RapidOhiaDeath.org









### 2020 Rapid 'Ōhi'a Death Newsletter Volume 4, Issue 3

~ I mohala no ka lehua I ke ke'eke'ehi 'ia e ka ua ~

Lehua blossoms unfold because the rains tread upon them. It is the rain

that brings forth the lehua blossoms. So do gentle words bring forth much that is desired.

From 'Olelo No'eau: Hawaiian Proverbs and Poetical Sayings, Honolulu, Hawaii: Bishop

Museum Press, 1983

This is our quarterly newsletter that was designed to update the community on current Rapid 'Ōhi'a Death (ROD) issues. If you wish to UNSUBCRIBE, scroll down to the bottom to do so.



### **Research Updates**

- Really exciting news! Our partners with the US Geological Survey (USGS) have found that 'ōhi'a seedlings planted beneath Rapid 'Ōhi'a Death (ROD) infected trees survive! The seedlings have been monitored for 1 year so far and all seedlings that died over the course of the study were tested for ROD and NONE came back positive for Ceratocystis. Some of the 'ōhi'a seedlings were planted within fences, some were outside of fences. Some had weeds pulled around them throughout the study and others did not. Dr. Stephanie Yelenik, ecologist with USGS and lead researcher for this project, said that seedlings were more likely to die if they were outside of fences and if weeds were not controlled. Check out the press release at <a href="https://www.usgs.gov/news/new-study-finds-restoration-forests-active-rapid-hi-a-death-infections-may-be-possible">https://www.usgs.gov/news/news/new-study-finds-restoration-forests-active-rapid-hi-a-death-infections-may-be-possible</a>
- The USDA Agricultural Research Service (ARS) Diagnostic Lab in Hilo is responsible for processing all ROD samples from across the state. Due to

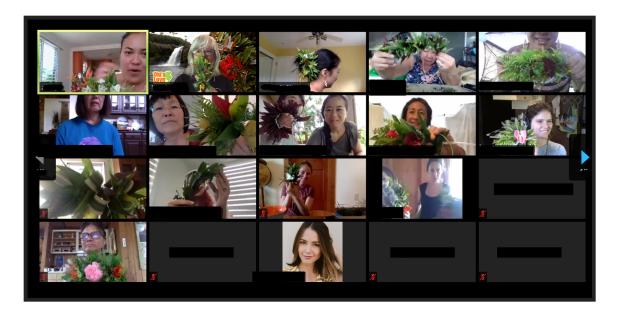
COVID-19 restrictions, USDA ARS is currently only processing high-priority samples. If you have any ROD samples please keep them in the refrigerator and we will inform everyone once ARS lab is accepting samples again. If samples are kept in the refrigerator, they can last up to 8, possibly 12 weeks.

- Since our last newsletter, COVID-19 restrictions have eased a little and the ROD field crews from across the state continue to work on 'ōhi'a conservation in a variety of ways:
- 1. Bi-annual helicopter surveys were conducted on all islands, with Hawai'i Island doing quarterly surveys, to identify suspect ROD trees;
- 2. Suspect trees from across the state are currently being sampled;
- The USDA lab in Hilo has re-opened and is able to process highpriority samples only at this time;
- 4. Baseline and monitoring surveys are being conducted of key forested plots by way of unmanned aerial vehicles (a.k.a. drones) on Kauai and Hawai'i Island;
- 5. Research projects continue across the state looking at topics such as entomology, pathology, genetics and resistance, spatial data analysis of aerial surveys, and 'ōhi'a restoration;
- 6. Boot brush stations at numerous trailheads across the state continue to be installed and maintained; and
- 7. Sowing and growing 'ōhi'a for scientific studies and future restoration efforts!



### **Management Tips**

You asked: What do I do after I find out that my tree has Rapid 'Ōhi'a Death (ROD)? Should I cut and tarp it? What about those ambrosia beetles -do I need to worry about them? Let's dig into this. Our current recommendations are to fell an infected ROD tree if the tree is a hazard and if you can cut it down safely (work with a certified arborist if it's a larger tree) and with no or minimal damage to other 'ōhi'a. If you're in a location with a lot of other infected trees, felling isn't going to be as critical as if you're in a place with lots of healthy 'ōhi'a. Tarping the wood after cutting helps to keep infectious particles contained. Our research partners with US Geological Survey (USGS) and Hawai'i Cooperative Studies Unit (HCSU) wanted to take a close look at different ways of treating the wood after a tree is cut. Their study compares tarping, insecticide, and no treatment for 'ōhi'a wood pieces infected with Ceratocystis lukuohia (the really aggressive RODfungus). To figure this out, they track a few things over time with the cut wood: the fungus' ability to grow, the number of beetles attacking the wood, and the number of beetles that exit the wood once it's cut. With help from Kaua'i Invasive Species Committee (KISC) and Big Island Invasive Species Committee (BIISC), our researchers have been carrying out this study on Kaua'i and Hawai'i Island -we'll let you know when results are out!



#### **Outreach Updates**

The COVID-19 worldwide pandemic has made us reevaluate what it means to do public outreach and engagement. This situation has forced us to get creative with thinking outside of the box and going virtual. Since our first virtual experience for Native Hawaiian Plant Month in April 2020, we have been active in doing virtual webinars and workshops for the public.

During the past several months we have held numerous webinars that discussed topics such as: Rapid 'Ōhi'a Death (ROD) distribution and abundance on Hawai'i Island, Impact of ROD on forest stands, Importance of beetles in spreading ROD, Tree and wood treatments, Community member actions to manage ROD, Restoration efforts, ROD management tracking system, and Detection and management of ROD on Kaua'i. All webinars were held twice daily and were also recorded. We are working on finding a platform to house all of our webinar recordings and will keep you updated once they are available for public viewing.

The ROD outreach team held a series of 'Ōhi'a-Free Lei Making Workshops for Everyone. We held three workshops in May and two in July 2020. The purpose of these workshops were to introduce the art of lei making and the importance that 'ōhi'a play in our everyday lives. We introduced the ecological and cultural importance of 'ōhi'a, why 'ōhi'a-free, ROD impacts to 'ōhi'a, and followed by instructions on how to make two different style of lei. We had many join us for this online interactive workshops from all across Hawai'i and the continental US.



### **Upcoming Events**

'Ōhi'a Love Fest 2020 will focus on strengthening and expanding relationships to celebrate and learn about 'ōhi'a trees and Hawaii's native forests. The foundation

of 'Ōhi'a Love Fest 2020 will be about coming together to grow empathy and connections. This year's festival will continue to engage and raise awareness within our local communities about Rapid 'Ōhi'a Death (ROD). We have broadened the scope in several ways this year to promote getting to know the forest people and through that, getting to know 'ōhi'a. We are devoting special attention to reaching new audiences, including those beyond Hawai'i. We encourage participants to give voice to 'ōhi'a and 'ōhi'a forests and to expand expression of how we contribute our voices. The festival will be a place to ignite quality dialogue among parents and keiki, friends, co-workers, and welcome new participants to join in that dialogue. Our hope is to strengthen community by learning how to care for 'ōhi'a, prevent the spread of ROD, and now take steps to restore 'ōhi'a and what it symbolizes both in the Islands and on farther shores.

Date: Monday, Nov. 16 – Saturday, Nov. 21

Duration: Weeklong event with 2 activities posts per day Potential Topics:

- 'Ōhi'a Varieties workshop
- Sowing and growing 'ōhi'a workshop
- 'Ōhi'a seed collecting workshop
- How to plant a lei garden workshop
- ROD Documentary showing
- A Day in the Life of ROD Field Crew
- Music
- Hula
- Instructional Crafting how-to's videos
- Cultural presentation
- Story telling through reading a children's book
- Art

We are still in the beginning phases of planning the 2020 Virtual 'Ōhi'a Love Fest so if you would like to volunteer, in any capacity, please don't hesitate to reach out to us at ohialove@hawaii.edu.

# 5THINGS YOUCANDO

### 1 DON'T MOVE 'ŌHI'A

Do not move 'ōhi'a wood, firewood, or posts, especially from an area known to have ROD. If you don't know where the wood is from, don't move it.

## 2 DON'T TRANSPORT 'ÖHI'A INTER-ISLAND

Comply with the new quarantine rule to help prevent ROD from spreading. Don't move 'ōhi'a plants, whole or parts, 'ōhi'a wood, or soil from Hawai'i island without a permit.

## 3 AVOID INJURING 'ŌHI'A

Wounds serve as entry points for the fungus and increase the odds that the tree will become infected and die from ROD. Avoid pruning and contact with heavy equipment wherever possible.

## 4 CLEAN YOUR GEAR/TOOLS

If you must work around or cut 'ōhi'a, clean tools and gear before and after use, especially when used on infected 'ōhi'a. Brush all soil off of tools and gear, then spray with 70% rubbing alcohol. Shoes and clothes should also be cleaned before and after entering forests. Wash clothes with hot water and soap.

## **5** WASH YOUR VEHICLE

Wash the tires and undercarriage of your vehicle with detergent and remove all soil or mud, especially after traveling from an area with ROD and/or if you have traveled off-road.

**Updated March 2017** 

#### **HOW CAN YOU HELP SAVE 'ŌHI'A?**

- Avoid injuring 'ōhi'a. Wounds serve as entry points for the fungus and increase the odds that the tree will become infected and die from Rapid 'Ōhi'a Death. Avoid pruning, weed-whacking, blazing trails, and stepping on roots wherever possible.
- 2. Clean gear and tools, including shoes and clothes, before and after entering the forest and areas where 'ōhi'a may be present. Brush all soil off tools and gear, then spray with 70% rubbing alcohol. Wash clothes with hot soapy water and dry on high heat.
- Wash your vehicle with a high-pressure hose or washer if you've been offroading or have picked up mud from driving. Clean all soil off tires-including mountain bikes and motorcycles--and your vehicle's undercarriage.
- 4. **Don't move 'ōhi'a wood or 'ōhi'a parts**, including adjacent soil. The disease can be spread to new areas by moving plants, plant parts, and wood from infected areas to non-infected areas.
- 5. Keep your eyes open. If you see 'ōhi'a with a limb or crown turning brown, take a picture and contact your local Invasive Species Committee via email or phone. Be sure to provide details on the tree's exact location. Samples of the wood must be taken by trained technicians and tested in a laboratory to confirm the presence of the ROD fungi.



**Meet Our People** 

Eva Brill

USDA Agricultural Research Service (ARS) Diagnostic Laboratory Research Technician

Eva Brill is a research technician at USDA ARS PBARC in Hilo. Her primary duty is lab work where she processes and analyzes the 'ōhi'a samples that are submitted from all islands to test for ROD. She is originally from New York but lived in Oregon working as a high school science teacher before moving to the Hawai 'i Island in 2012 to pursue her masters in Tropical Conservation Biology and Environmental Science at UH Hilo. She started on the ROD project in 2017. A lover of nature, Eva enjoys hiking and swimming. She is constantly amazed and awed by the endemic flora and fauna of Hawai'i and is grateful to be part of such an important project.

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## Our mailing address is: University of Hawaii Komohana Research and Extension Center 875 Komohana St. Hilo, HI 96720

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