

RapidOhiaDeath.org



# 2020 Rapid 'Ōhi'a Death Newsletter Volume 4, Issue 1

# ~ Welehu ka malama, liko ka 'ōhi'a ~ Welehu is the month when the 'ōhi'a trees are putting forth leaf buds

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**

• The updated Rapid 'Ōhi'a Death Strategic Plan has just been published and is available for reading and downloading <u>here</u>. This document outlines efforts and progress made in understanding the disease, its pathology, and the various science-driven management activities implemented across the state for long-term health of our forests. It also provides recommendations for priority actions, complete with cost estimates.

- Marc Hughes (University of Hawai'i at Manoa) and Jennifer Juzwik (US Forest Service, Northern Research Station) have completed two of three heat-treatment projects with 'ohi'a logs colonized by the ROD Ceratocystis fungi. Small diameter logs (2-5" dia./ 6-8 ft. long) were cut from trees infested with C. lukuohia and C. huliohia and placed on top of a commercial load of cut lumber in a large dehumidification kiln at a Hilo, HI, mill. The entire load was subjected to the mill owner's normal drying schedule (approx. 21 days) with temperatures increased slowly over time to 140°F and held for 24 hrs. at the max temperature. Results of the two trials showed complete eradication of the ROD fungi in the logs compared to non-treated logs held at ambient temperatures. A portable vacuum steam system was also evaluated for treating large diameter (12-18") *Ceratocystis*-infested logs with two collaborators from Virginia Tech University. Treatments involved raising the temperature of the wood up to a 5.5" depth (depending on log) to 133°F or 140°F for 30 or 60 minutes, respectively. Using this protocol, the ROD fungi were eradicated from 99.9% of sampled wood locations in less than 24 hours. However, a vacuum steam system in not yet available on Hawaii Island. Additional tests of a vacuum drying kiln presently on island are being conducted for its ability to kill ROD fungi in medium diameter logs (8-11"). Potential operational use of any of these heat treatments will allow for safe movement and use of wood and logs and with guidance from the Hawaii Department of Agriculture are aimed to comply with state guarantine regulations. The movement of untreated wood is not recommended.
- The fungi (*Ceratocystis lukuohia* and *Ceratocystis huliohia*) that kill 'ōhi'a are known as "wound pathogens". That means in order for the tree to become infected, the tree has to have a wound a wound that penetrates the bark. Wounds allow the microscopic fungal spores to enter a tree. Trees can be wounded in different ways when high winds break branches, by scuffing tree roots when hiking, when blazing trails in the forest, by pruning trees in your yard. And there's another way: when animals such as pigs, goats, cattle, or sheep peel or rub bark off trees. Studies on Hawai'i Island show that areas without such animals have much lower prevalence of ROD. Often, these areas are fenced to keep animals out. Data for unfenced areas show an opposite pattern. In these areas, where ungulates roam, trees get wounded and there can be a much greater

prevalence of 'ōhi'a that have died due to ROD. The two take-aways here: 1) it's important not to wound 'ōhi'a; and 2) it's important to protect 'ōhi'a from hooved animals.



**Management Tips** 

Merrie Monarch hula season is upon us soon and we wish to share a friendly reminder that there is a quarantine rule prohibiting 'ōhi'a related products (soil, lei material, seeds, etc) from being transported off of Hawai'i Island. If you are in Hilo for the festival and want to make your own lei please apply for a permit with the Division of Forestry & Wildlife (DOFAW) if picking on State lands, and follow permit guidelines for picking. Consider using alternatives to 'ōhi'a like red ti,



## **Island Outreach Updates**

Our team was very active in 2019! In addition to the work below, we maintained the ROD website and social media platforms -our Instagram following is over 2,300 and our Facebook following is now over 5,000 people!

### Kaua'i

Since May 2018 to date, the Kaua'i ROD specialist has worked with various stakeholders such as landowners, leaseholders, forest users, conservation groups, visitors, residents, local government, and the general public. She has participated in 19 public events in where she interacted with the attendees spreading the message on how people can help to stop the spread of ROD across the state. She also has completed 30 presentations, 13 workshops, and 12 documentary screenings reaching a total of 10,450 people on Kaua'i. The

indirect reach from this outreach resulted in 19 mentions on TV coverage, 44 printed/online stories, 5 radio interviews, 2 rounds of radio PSA's (9 stations), and 3 articles in travel magazines.

#### Maui

In 2019, outreach specialists from DOFAW and Maui Invasive Species Committee helped to conduct Rapid 'Ōhi'a Death outreach on Maui. They conducted outreach at 10 community events, held numerous workshops, had 4 school presentations, and wrote 6 articles for the Maui News, reaching over 1,100 residents.

### **Statewide**

In 2019, the statewide coordinator conducted outreach on all main Hawaiian Islands including Moloka'i and Lana'i. She completed 31 presentations, 10 workshops, 1 public meeting, 25 public events, and 8 documentary screenings reaching a total of 3,615 people. We have also developed 4 quarterly newsletters in 2019 reaching over 2,000 people. In addition to outreach across the islands, our outreach coordinator also presented on ROD in New Zealand at a Biosecurity Conference.

### Hawai'i Island

In 2019, ROD outreach on Hawai'i Island has been vast. Staff have completed 40+ events and activities including: ROD symposia, Merrie Monarch Festival, ROD decon kit giveaways, biosantiation trainings, outreach at Puuhuluhulu, 'Ōhi'a Love Fest, sowing and growing 'ōhi'a workshops, creating and airing radio public service announcements, and an 'ōhi'a-alternative wreath making workshop reaching over 8,000 people.



**Upcoming Events** 

The Rapid 'Ōhi'a Death Working Group invites you to join us for the upcoming

- East Hawai'i ROD Symposium, Saturday, March 21, 2020 at the University of Hawai'i at Hilo, UCB 100, in Hilo, Hawai'i
- West Hawai'i ROD Symposium, Saturday, March 28, 2020 at the West Hawai'i Civic Center, County Council Chambers in Kona, Hawai'i

Refreshments will be available at 8:30AM. We welcome you to enjoy a bit of food and drink, introduce yourself to our speakers, then join us for morning protocol to kick off this 3-hour event, scheduled from 9AM-12PM.

We'll provide updates on Rapid 'Ōhi'a Death by the lead researchers and managers and opportunities to ask questions of the panel. Attendees 18yrs+ will receive a free ROD decontamination kit.

This is a free public event. Seating is limited, so please be sure to register at www.RapidOhiaDeath.org



## **Meet Our People**

Rob Hauff State Protection Forester DLNR - Division of Forestry and Wildlife

Rob Hauff started working in Pacific Islands forestry with the US Forest Service conducting research on mangrove forests in Micronesia. He has worked for the Hawai'i State Division of Forestry and Wildlife since 2002 and currently serves as the State Protection Forester in downtown Honolulu. While working for the Division he has led the forest health program, focusing on invasive pests such as Erythrina gall wasp, myrtle rust, myoporum thrips, and Rapid 'Ōhi'a Death.



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