RapidOhiaDeath.org



2018 Rapid 'Ōhi'a Death Newsletter

Volume 2, Issue 3

~ Ka ua moaniani lehua o Puna,

he ua no ke aloha ~

The rain that brings the fragrance of the lehua of Puna is a rain of love

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.



Video of Rapid 'Ōhi'a Death (ROD) detection on east side of Kaua'i

Research Updates

 As of May 2018, Rapid 'Ōhi'a Death (ROD) was found in the Moloa'a Forest Reserve on Kaua'i. Of the two pathogens that cause ROD, the canker pathogen, *Ceratocystis huliohia*, was detected in 13 trees to date. Crews from the Division of Forestry and Wildlife, The Nature Conservancy, Kaua'i Invasive Species Committee, and the National Tropical Botanical Garden are currently working on delineating the boundaries of the detection site to gain insight into the extent of the outbreak. We encourage Kaua'i residents and visitors to be extra cautious about proper decontamination of gear by brushing and spraying with 70% rubbing alcohol.



For generations, 'ōhi'a has been a common wood source for the • people of Hawai'i and has a variety of uses. Researchers from the University of Hawai'i at Mānoa, US Department of Agriculture Agricultural Research Service and USDA Forest Service are evaluating kiln-heating to provide an effective way to render 'ohi'a logs safe for use and movement within islands known to have the ROD fungi and among the other islands of Hawai'i. Kiln-heating is an environmentally friendly and effective treatment used to eradicate insect pests and pathogens in dimension lumber and solid wood packaging material in international trade. Studies are needed to determine if kiln-heating can be used as an effective treatment for 'ohi'a logs. In the current 'ohi'a study, 1 foot sections are first removed from both ends of the 10 foot long harvested and de-barked logs and extensively sampled to document presence of living *Ceratocystis* prior to treatment. Temperature probes are then inserted in the center of selected logs and all the logs are placed at the top of a commercial, dimension lumber load in a dehumidification kiln. The temperature is gradually increased over a number of days until an internal "log-core" temperature of 140 F is reached and then maintained for 24 hours. After being removed from the kiln, the ends of each log are sampled and tested for living *Ceratocystis* in the same manner done for pre-treatment logs.



 Pūlama Lāna'i has ramped up efforts to collect 'ōhi'a seeds for the #OhiaLove project. Kari Bogner, the botany program manager for Pūlama Lāna'i, has been spearheading field collections. So far, she and others from the company's natural resources department have collected seeds from over 30 individuals. They hope to collect from many more 'ōhi'a trees in the next couple of years representing different species and varieties of 'ōhi'a. The seeds are being banked at Lyon Arboretum and Maui Nui Botanical Garden (MNBG). Seeds from several of the collections are being germinated at the company's conservation nursery and will be used for restoration efforts on island. Additional seedlings from germination trials at MNBG will also be used on island for restoration purposes. Through the Rapid 'Ohi'a Death Seed Banking Initiative, UH Lyon Arboretum and Laukahi Hawai'i Plant Conservation Network are leading efforts to expand capacity for collection and banking of 'ohi'a seeds across all islands in response to the ROD crisis. Thanks to funding from Hawai'i Tourism Authority in 2017-2018, they held 15 workshops on 5 islands and trained 350 people how to collect 'ohi'a seeds! During that time, Lyon Arboretum banked 3.9 million 'ōhi'a seeds in 165 new collections from 12 taxa of *Metrosideros* from O'ahu, Kaua'i, and Maui. This brings the total number of 'ōhi'a seeds stored at Lyon to over 7 million! Their partner Hawai'i Island Seed Bank (Kona) also stored over 100 collections from Hawai'i Island varieties of 'ōhi'a. Together, all the Hawai'i Seed Bank Partnership facilities banked over 11.5 million seeds from 440 trees across the state with funding from HTA in 2017-2018. The project continues and the partnership receives new seeds from trained collectors on a regular basis. They hope to offer more training workshops in the near future. Learn more about the ROD Seed Banking Initiative and sign up for future workshops at ohialove.com.



Management Tips

While you're out, keep 'ōhi'a in mind. The fungi that cause ROD enter into 'ōhi'a trees through breaks or injuries to the trees' bark. While you're out hiking or walking near 'ōhi'a trees on your property, be mindful of 'ōhi'a – avoid stepping on any exposed roots and breaking branches. Keep weed whackers, lawn mowers, and other equipment away from 'ōhi'a trunks and roots. Pruning 'ōhi'a is definitely a way to break bark, so only prune 'ōhi'a trees if there is a danger to your home, vehicles, or family. If you do need to prune your tree, we recommend using a spray can type of pruning sealer to cover the wound created by pruning

- The East Hawai'i greenwaste station is now processing chipped material to minimize the spread of pests and disease in greenwaste products. ROD researchers will be working with Hawai'i County to test the final greenwaste product and see if the processing eliminates infectious ROD material. *Communities should still avoid bringing 'ōhi'a to greenwaste stations.*
- One of the ways that you can help prevent the spread of ROD is by planting 'ōhi'a in your yard, garden, school or workplace. To find 'ōhi'a plants you can call your local nurseries or state nurseries to find out if they sell 'ōhi'a seedlings. Ask the grower how the seedlings are treated so that you're not bringing invasive species such as ROD or ants to your property. If you're wanting to grow your own 'ōhi'a, check out our booths on Hawai'i Island, where we provide people with their own little pot of 'ōhi'a seeds to grow their own forest (all seeds are locally sourced). Pots with seeds offered when supplies are available.



Upcoming Events

'Ōhi'a Love Fest – August 26th, 2018 'Imiloa Astronomy Center

The goal of this FREE public event is to celebrate 'ōhi'a and promote awareness about this important tree. Bring your keiki and make fun 'ōhi'a

crowns. Hear about the traditional Hawaiian practice of using 20+ ft 'ōhi'a poles to fish. Take a 3D tour through 'ōhi'a forests. All these fun activities and more will promote ways we can help to prevent the spread of Rapid 'Ōhi'a Death. In addition, we will have games, prizes, a photo booth, live music, hula, food vendors, and there will be free access to 'Imiloa Center and the planetarium



ROD Documentary Premieres:

August 17 – Kahilu Theatre (Waimea) August 31 – Aloha Theatre (Kainaliu)

Doors open at 6:30pm with program starting at 7:00pm

Please visit <u>www.rapidohiadeath.org</u> to register for this free event and for further information.

Also will be aired on TV throughout August and September



Meet Our People

Anya Tagawa

DLNR - Division of Forestry and Wildlife

I have always been passionate about science. Growing up on Hawai'i Island greatly influenced this passion which, over the years evolved into a passion for conservation of Hawai'i's ecosystems. I enjoyed learning about ecosystem processes, the incredible native plant species that have adapted here, and the innovative techniques used to help conserve this special place. I wanted to be a part of this, and decided to pursue a degree in Tropical Conservation Biology Biology and Environmental Science. Through this I found another passion, outreach and education.

Currently, in my position as Outreach and Education Specialist for the Hawai'i Island Natural Area Reserves System (DLNR - DOFAW) I enjoy working in the vastly different ecosystems our program manages and creating awareness about these unique and beautiful areas and the threats that they face. More recently, with the appearance of Rapid 'Ōhi'a Death, much of my time has been spent working with an amazing team with the goal of spreading awareness about this pathogen.

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