



## DEPARTMENT OF LAND AND NATURAL RESOURCES

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### JOINT NEWS RELEASE

#### FOR IMMEDIATE RELEASE

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### AGGRESSIVE RAPID 'ŌHI'A DEATH FUNGUS FOUND ON KAUA'I

(Lihue)-Detection of *Ceratocystis lukuohia*, the more virulent of the two fungal pathogens causing Rapid 'Ōhi'a Death (ROD), has now been confirmed in three trees on Department of Hawaiian Homelands parcel behind Kalalea Mountain on the east side of Kaua'i. This first detection of *C. lukuohia* comes after the other pathogen resulting in ROD, *Ceratocystis huliohia*, was detected on Kauai in three distinct locations this past year.

"These three trees that tested positive for *C. lukuohia* were spotted by our rapid response team as they were conducting botanical surveys across the island," said Sheri S. Mann, Kaua'i District Manager for the DLNR Division of Forestry and Wildlife (DOFAW). "Later, a team trekked by foot to visually inspect and take samples from the tree."

'Ōhi'a die for many reasons, although symptoms consistent with ROD include the sudden browning of leaves on limbs or the entire crowns of trees. The fungus is not visible on the leaves or the bark but grows in the sapwood just below the bark. The three trees that were sampled earlier this month stood out in a forest of green, because the entirety of the trees leaves had browned.

Samples were then sent to the USDA Agricultural Research Service (ARS) in Hilo for the necessary laboratory testing that confirmed *C. lukuohia* in all three trees.

"This is obviously news we didn't want to hear," Mann said. "But within a day of learning the news, we scheduled a helicopter to conduct more digital mobile sketch mapping to identify any additional symptomatic trees. We followed that with pinpoint drone surveys conducted by the UH Hilo Department of Geography SDAV Lab and more tree sampling to try and determine the severity and distribution of the outbreak. It's been a busy week."

A benefit for Kaua'i is the hard-earned research conducted on Hawaii Island where ROD was identified more than four years ago. Hundreds of thousands of trees have died due to ROD on Hawai'i Island, more than 90 percent due to *C. lukuohia*. Earlier this year, scientists at ARS

described the two-different species of fungi that cause ROD as *C. huliohia* and *C. lukuohia*. Both species are new to science.

The difference between the two pathogens is how they move through the tree and how quickly they kill.

“The pathogen enters the tree through a wound; be it a broken limb, twig or, perhaps, a scuffed up exposed root. Whereas *C. huliohia* may take months to years to kill an ohia tree, *C. lukuohia* can kill a tree within weeks,” said James B. Friday, the extension forester with the University of Hawaii.

The Kauaʻi ROD Working Group does not know exactly when or how the disease arrived on Kauaʻi-whether it was the result of human activity or on its own, e.g. via the wind.

Once additional lab results and drone imagery are available, the rapid response team will consult with the ROD science team to determine what management actions should be taken.

“Our priority is to save ohia. It has a critical role in the ecosystem’s function,” said Tiffani Keanini, project manager of Kauaʻi Invasive Species Committee (KISC). “We are currently determining the best method to contain the spread and prevent ROD from entering pristine watershed areas. At this point, we are treating the recent outbreak with rapid response actions. As we learn more about the distribution and density of the affected area, we will likely adapt our management strategy efforts.”

The *C. lukuohia* detection site is located in a remote area at 550-foot elevation. This forest location is comprised of a mix of native trees and plants like ʻōhiʻa, koa, hala, and uluhe that are being crowded out by non-natives such as albizia, java plum, strawberry guava, and octopus trees. Unfortunately, any loss of a native tree will give rise to the faster-growing invasives unless aggressive native tree plantings take place.

As there is no known cure to ROD, prevention is the key to ensuring it doesn’t spread and both Kamaʻaina and visitors can help by following these key five guidelines:

- 1) Keep your eyes open. If you see ʻōhiʻa with a limb or crown turning brown, take a picture, and contact KISC via email ([saveohia@hawaii.edu](mailto:saveohia@hawaii.edu)) or phone (808-821-1490). Samples of the wood must be taken by trained technicians and tested in a laboratory to confirm the presence of the ROD fungi.
- 2) Avoid injuring ʻōhiʻa. 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.
- 3) Clean gear and tools, including shoes and clothes, before and after entering the forest and areas where ʻōhiʻa may be present. Brush all soil off tools and gear, then spray with 70% rubbing alcohol. Wash clothes with hot water and soap.
- 4) Wash your vehicle with a high-pressure hose or washer if you’ve been off-roading or have picked up mud from driving. Clean all soil off tires--including mountain bikes and motorcycles--and vehicle undercarriage.
- 5) Don’t move ʻōhiʻa wood or ʻōhiʻa 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.

## **MEDIA RESOURCES**

(All images/video courtesy: DLNR)

HD video-field survey training, digital sketch mapping (May 11, 2018)

<https://vimeo.com/269082425> (shot sheet attached)

HD video-Kauai Rapid Ōhi'a Death video news release (May 11, 2018)

<https://vimeo.com/269288041>

Photographs-digital sketch mapping, field survey training: (cut sheet attached)

<https://www.dropbox.com/sh/mq70cw6a28ntdvv/AADuifNH5sjB19I0e0ZSRz7ba?dl=0>

Video-Ceratocystis: Tale of Two Species & Screening for Resistance:

<https://vimeo.com/258657188>

For more on Rapid Ōhi'a Death:

<https://cms.ctahr.hawaii.edu/rod/>

Credit: Kauai Invasive Species Committee/Kim S. Rogers:

[https://www.dropbox.com/sh/bfvw1jtvzfiwv21/AABcDlc\\_BMwJqMDwUWaoK36-a?dl=0](https://www.dropbox.com/sh/bfvw1jtvzfiwv21/AABcDlc_BMwJqMDwUWaoK36-a?dl=0)

Seanne Igne (Protection Forester/DOFAW) is pictured while conducting Digital Mobile Sketch Mapping surveys via helicopter.

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