

5 Things you can do



1 Keep your eyes open

If you see 'ōhi'a with ROD symptoms, take a picture and contact Kaua'i Invasive Species Committee right away. Samples of the wood must be taken by a trained technician and tested in a lab to confirm the presence of the ROD fungi.

2 Avoid injuring 'ōhi'a

Avoid cutting or wounding 'ōhi'a and stepping on tree roots. Openings in the bark create entry points for the fungus and increase the odds that the tree could become infected with ROD.

3 Clean your shoes, tools, and gear

Fungal spores can be spread in soil from infected areas. Always clean your shoes, clothes, and gear before traveling to another island or forested area. If you work around or cut 'ōhi'a, clean tools and gear before and after use. Brush all dirt off equipment, then spray with 70% rubbing alcohol. Wash clothes with hot water and soap.

4 Wash your vehicle

Invasive species often move on and in vehicles. Wash the tires and undercarriage to remove all dirt, especially after traveling off-road. Take special care when shipping vehicles interisland.

5 Don't move 'ōhi'a

The disease can be spread to new areas by moving 'ōhi'a plants, plant parts, and 'ōhi'a wood from infected areas. Don't transport 'ōhi'a interisland without a permit.



FOR THE LATEST INFORMATION, MAPS, AND UPDATES ON RAPID 'ŌHI'A DEATH PLEASE VISIT:

www.rapidohiadeath.org

 www.facebook.com/rapidohiadeath

 www.instagram.com/rapidohialife

If you suspect ROD in your area please contact:

Kaua'i Invasive Species Committee

Email: saveohia@hawaii.edu

Phone: (808) 821-1490



RAPID 'ŌHI'A DEATH



UH MĀNOA COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES
USDA AGRICULTURAL RESEARCH SERVICE
USDA INSTITUTE OF PACIFIC ISLANDS FORESTRY
DEPARTMENT OF LAND AND NATURAL RESOURCES, DIVISION OF FORESTRY AND WILDLIFE
INVASIVE SPECIES COMMITTEES OF HAWAII (PROJECTS OF PCSU UH MĀNOA)

Help Protect 'Ōhi'a Trees on Kaua'i

RAPID
'ŌHI'A
DEATH

I OLA 'ŌE I OLA MĀKOU NEI

"My life is dependent on yours, your life is dependent on mine."

No other Hawaiian tree embodies this 'olelo (saying) like 'ōhi'a (*Metrosideros spp.*). These trees are unique to Hawai'i and 'ōhi'a forests cover nearly 1 million acres statewide.

'Ōhi'a are pioneers of fresh lava flows, gathering ("ohi") life by breaking down rock and improving conditions for other plants and animals to thrive. As the backbone of Hawai'i's native forests, 'ōhi'a are a critical source of fresh water, shelter, food, and inspiration. The many relationships nurtured by these trees have inspired hula (dance), mo'olelo (stories), mele (songs), and 'oli (chants) for generations.

A NEWLY IDENTIFIED DISEASE

A disease called Rapid 'Ōhi'a Death (ROD) is infecting and killing 'ōhi'a on Hawai'i Island at an alarming rate. ROD is caused by two newly discovered species of fungi: *Ceratocystis lukuohia*, destroyer of 'ōhi'a, and *Ceratocystis huliohia*, disrupter of 'ōhi'a. Both of these fungal pathogens can infect and kill 'ōhi'a when the fungal spores enter through an open wound in the 'ōhi'a tree. Over the course of a few months, the fungus spreads inside the tree until it cuts off the flow of water, killing the tree. In 2018, ROD was first detected on Kaua'i in multiple locations. A rapid response team is actively monitoring and managing Hawai'i's sacred tree on Kaua'i. There is no known cure or way to eradicate the disease, so we must prevent the spread of ROD wherever possible, and work together to protect 'ōhi'a.



SYMPTOMS OF THE DISEASE

- Leaves on limbs or entire crowns of 'ōhi'a trees suddenly turn yellowish or brown; dead leaves may remain on branches for some time.
- ROD-causing fungi can't be seen from the outside; it grows and spreads within a tree for months or longer before the leaves start to wilt and brown.
- To confirm ROD in an 'ōhi'a tree, a wood sample must be taken and tested in a lab. If you see an 'ōhi'a tree with possible symptoms of ROD, please contact Kaua'i Invasive Species Committee (KISC) and provide photos, if possible, and a specific location of the tree(s). KISC is assisting with surveying, sampling, and response.



Fungal Staining of Sapwood.

A tree may be infected for months or longer before symptoms appear.

FOR MORE INFORMATION:
RapidOhiaDeath.org

QUARANTINE RULE

Researchers have learned that tiny ambrosia beetles bore into sick or dead 'ōhi'a trees, pushing out infected sawdust which may be able to spread the disease short distances. People could accidentally spread ROD to new areas by moving infected 'ōhi'a or soil. The Hawai'i Department of Agriculture (HDOA) prohibits the transport of high risk items from ROD-infected islands except by permit from HDOA Plant Quarantine Branch.

Items prohibited from transport from islands with ROD

- 'Ōhi'a plants (all *Metrosideros spp.*)
- 'Ōhi'a plant parts
- Unfinished 'ōhi'a logs and wood products
- 'Ōhi'a wood chips, sawdust
- Soil

Permits may be issued to move these products if they can be tested and proven to be free of ROD. Visit HDOA.HAWAII.GOV for information.



Left: Ambrosia beetle boring tunnels. Right: ROD in Hilo Forest Reserve