RAPID ʻŌHIʻA DEATH

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Science-x Webinar Series
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The ROD Working Group

USDA Forest Service

USDA Agricultural Research Service

UH Mānoa College of Tropical Agriculture and Human Resources

University of Hawai‘i at Hilo

Hawai‘i Department of Agriculture

Department of Land and Natural Resources – Division of Forestry & Wildlife

US Geological Survey

Hawai‘i Invasive Species Council

Invasive Species Committees

Coordinating Group on Alien Pest Species

Arizona State U. -Global Airborne Observatory

The Nature Conservancy

Iowa State University

And many others…

RAPID ʻŌHIʻA DEATH

ʻŌHIʻA

Metrosideros polymorpha

Photos by J. B. Friday, Anya Tagawa, Jack Jeffery, Lisa Keith, Corie Yanger, Blaine Luiz, Curtis Ewing, Carter Atkinson, Marc Hughes, Wade Heller, Greg Asner, Ryan Perroy, and others

Dominant tree in wet and mesic forests on all islands

Endemic to Hawaiʻi

Highly variable

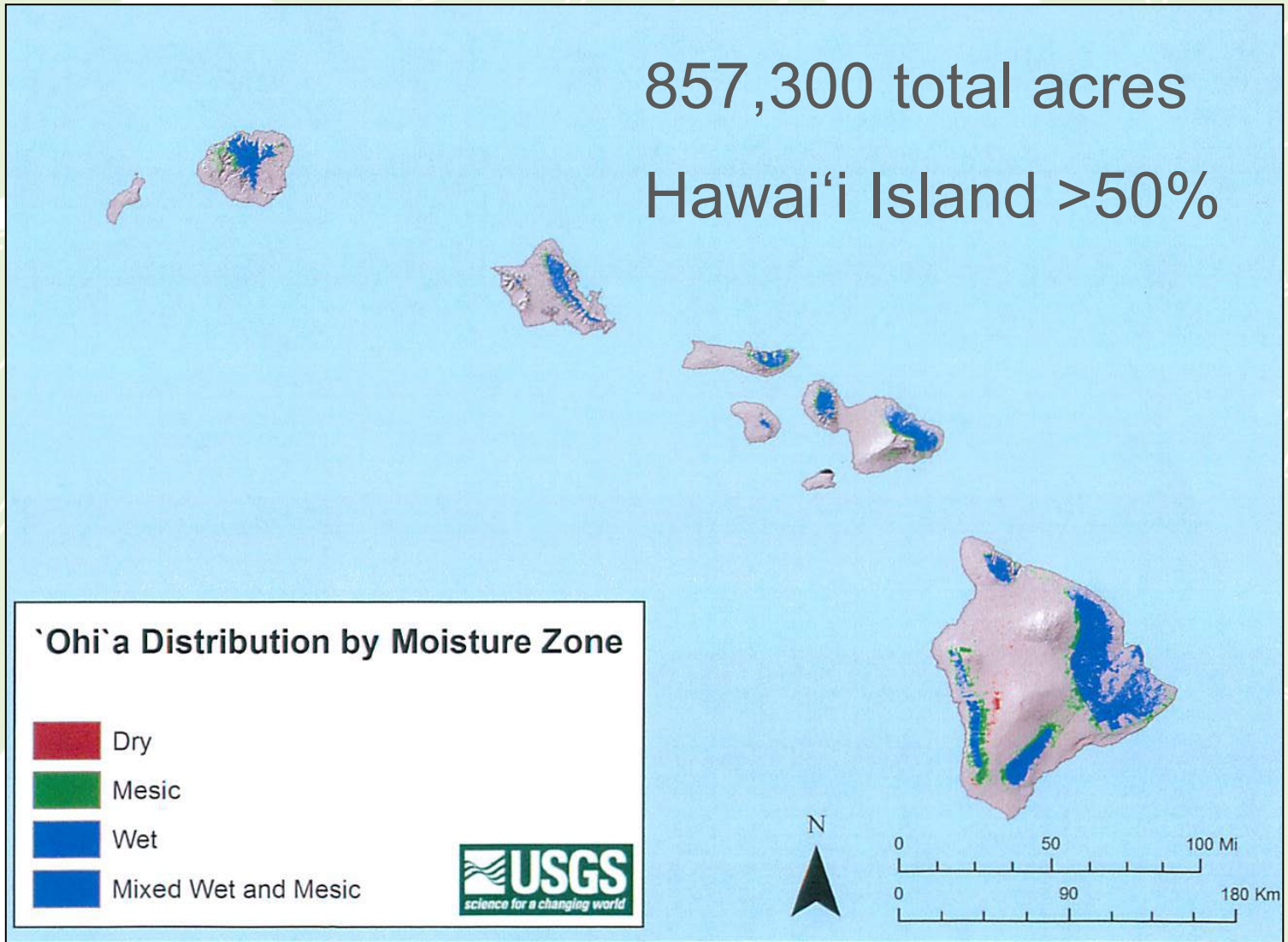
Shrub to tall tree

Coast to 8,000 ft. elev.

Pioneer & keystone

RAPID ‘ŌHI‘A DEATH

Statewide ‘Ōhi‘a Distribution



RAPID ‘ŌHI‘A DEATH

What is Rapid ‘Ōhi‘a Death?

Fungus: *Ceratocystis*

Enters through wounds

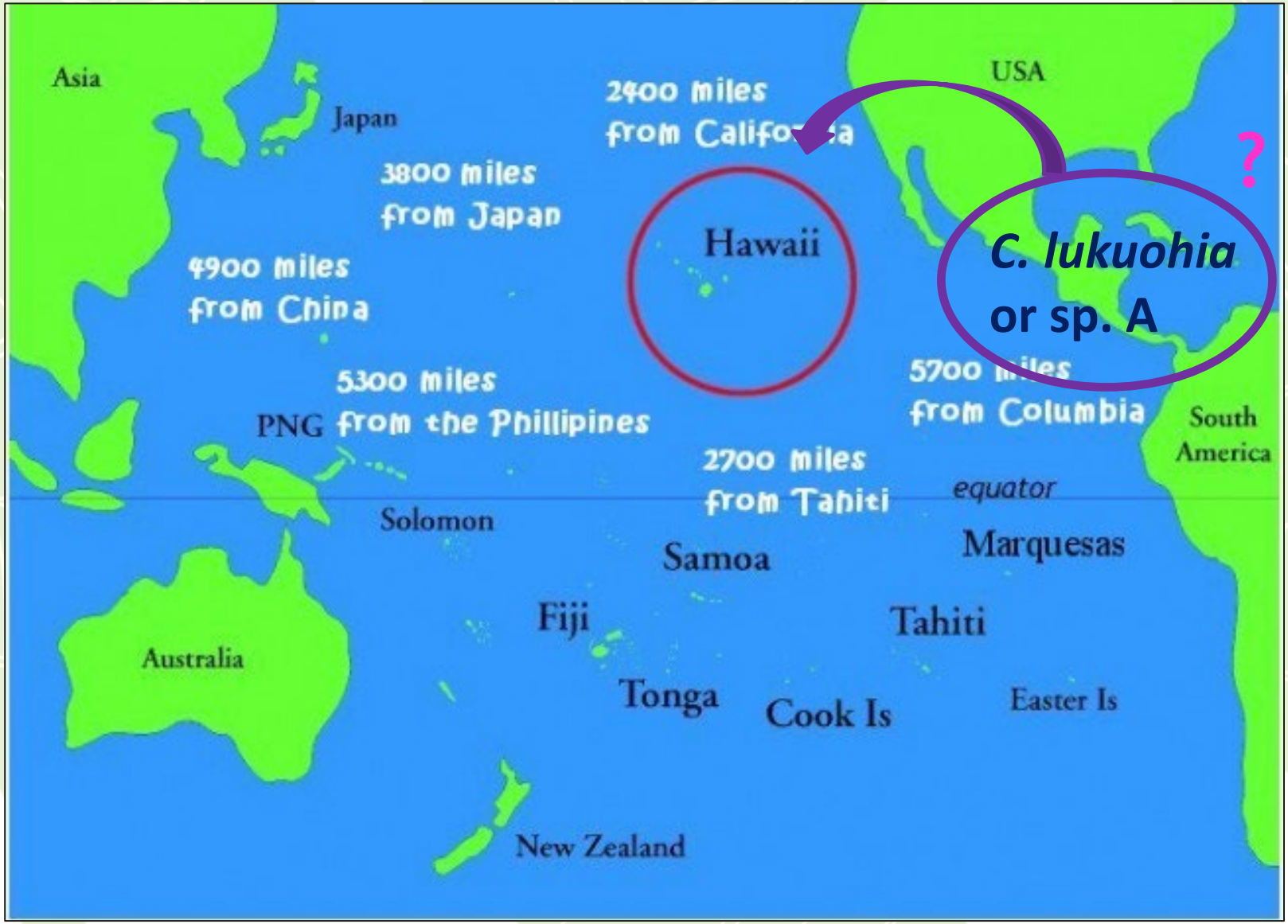
Cannot be seen on outside surfaces of tree

Grows in sapwood

Cuts off water supply

RAPID ʻŌHIʻA DEATH

Where did the fungus come from?



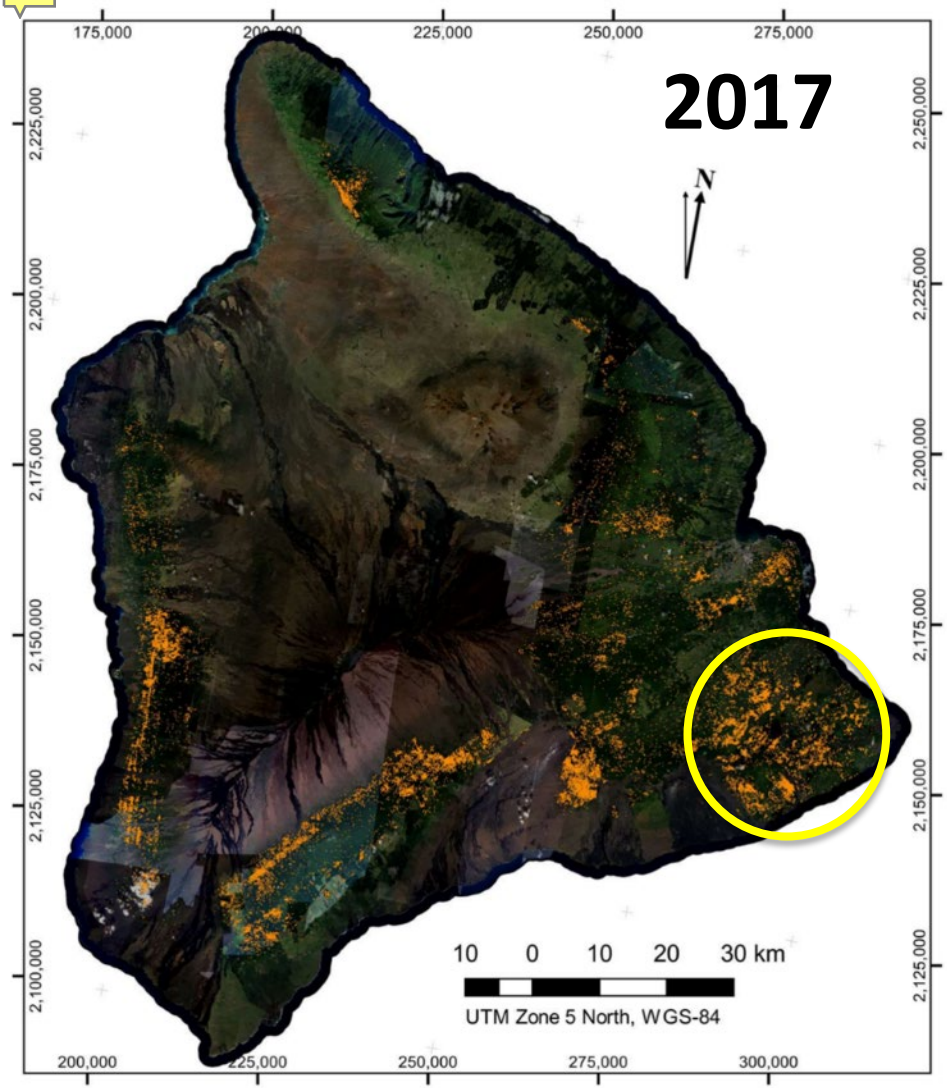
RAPID ‘ŌHI‘A DEATH

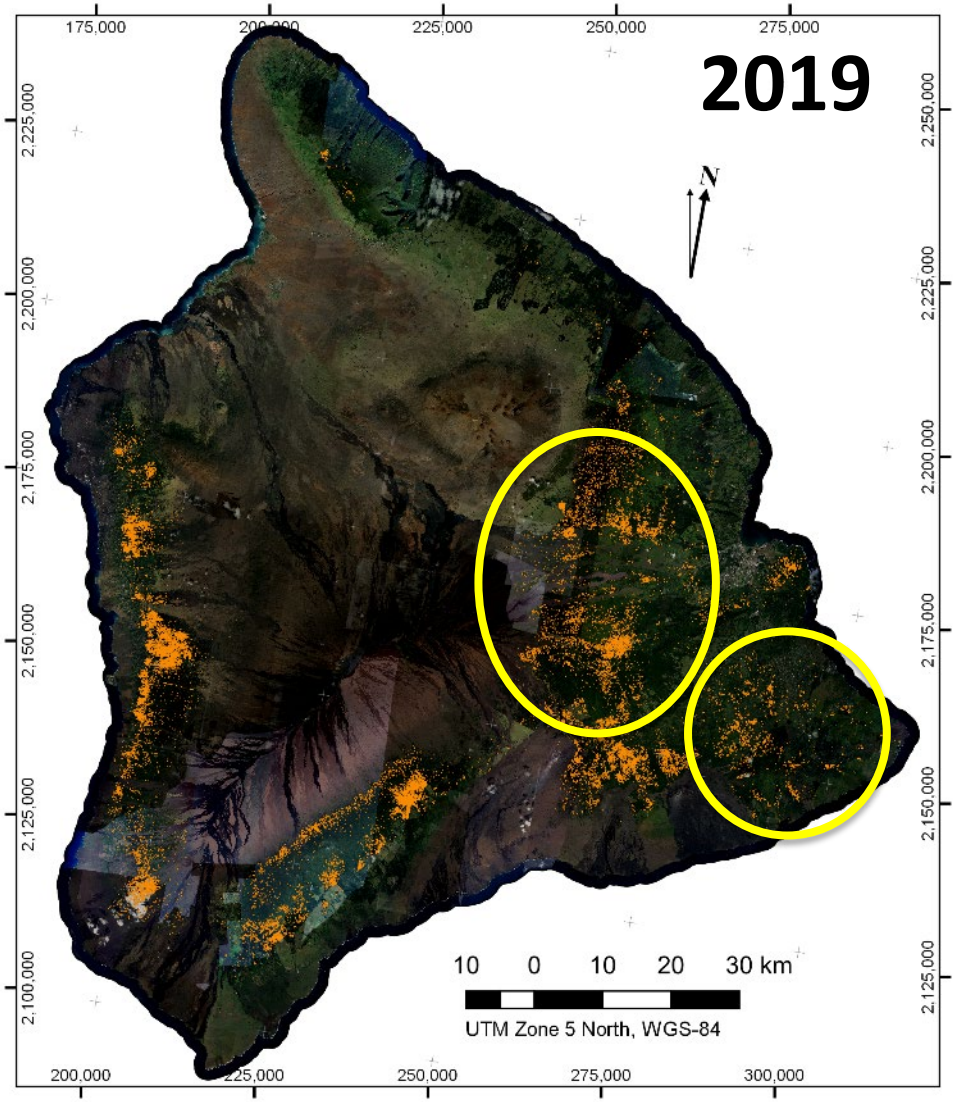
Rapid ‘Ōhi‘a Death in Forests

Native ‘ōhi‘a forest in Puna, 2005

RAPID ʻŌHIʻA DEATH

Rapid ʻŌhiʻa Death in Forests



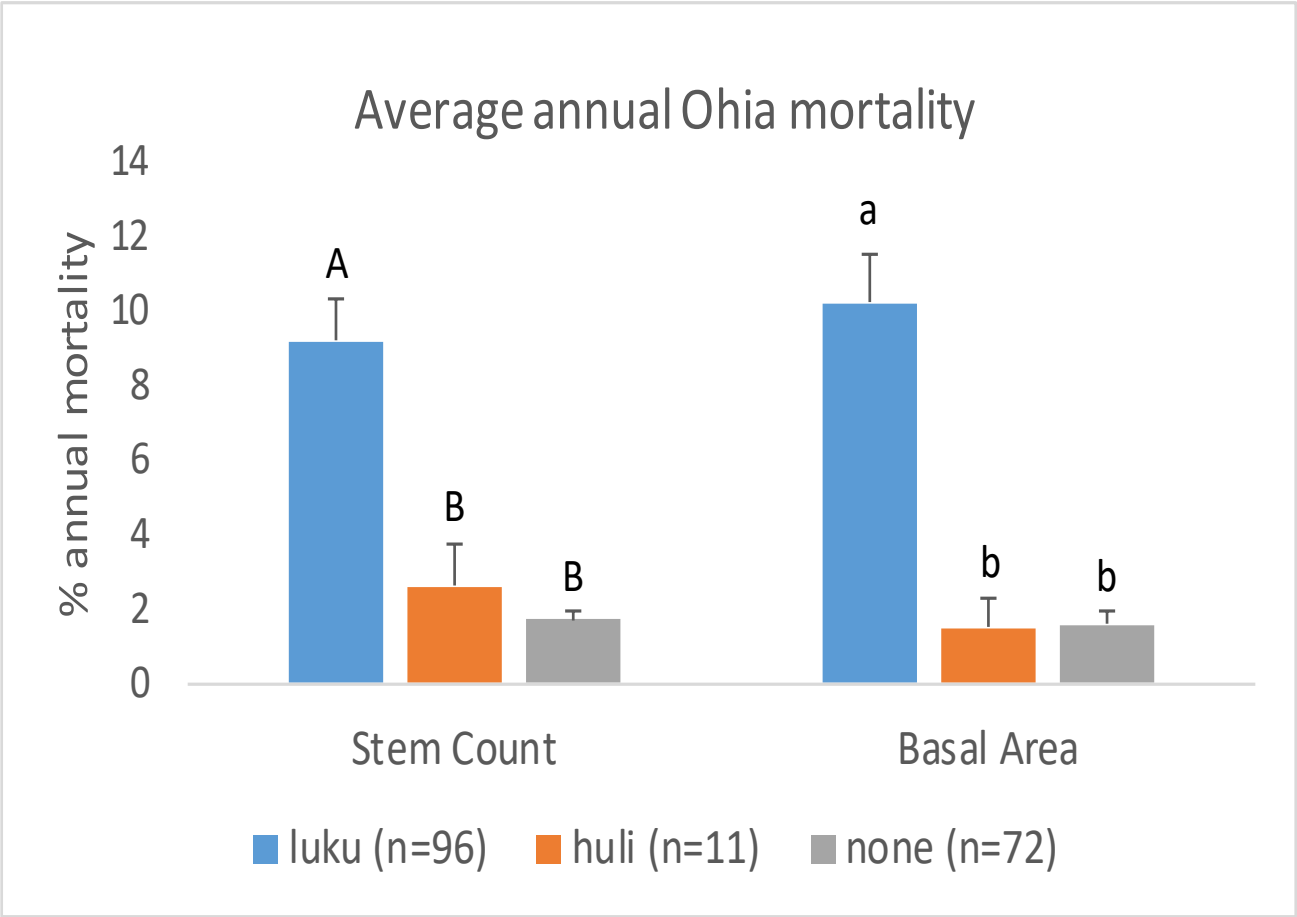


- **Mortality ~200,000 trees / year in 2016, 2017, 2018, 2019**
- **Diseased areas moving north, uphill?**
- **Skips to other islands**

RAPID ‘ŌHI‘A DEATH

What rates of ‘ōhi‘a mortality do we see?

Flint Hughes, USDA Forest Service



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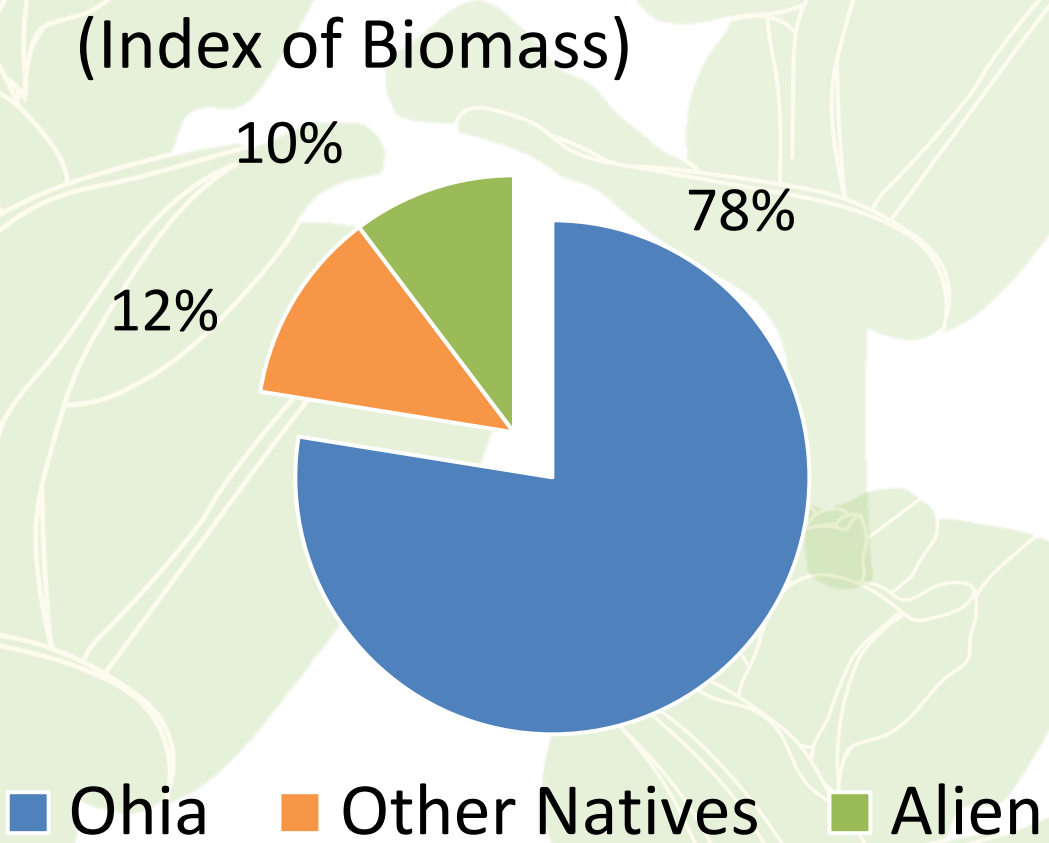
Forest Stand Basal Area in plots

Flint Hughes, USDA Forest Service



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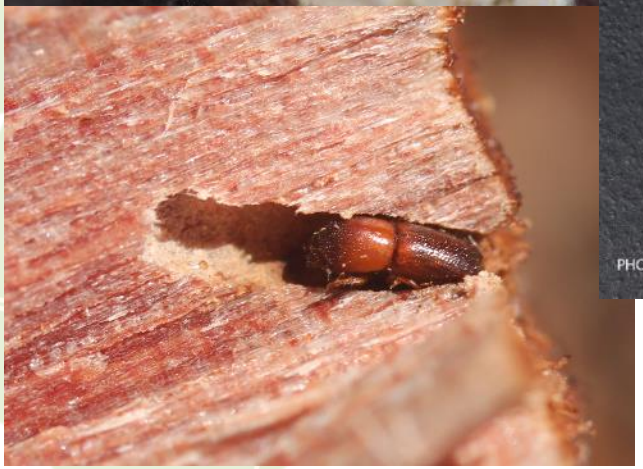
How does ROD move?

Ambrosia beetles & wind spread contaminated frass



Beetles are attracted to wounded or dead ‘ōhi‘a

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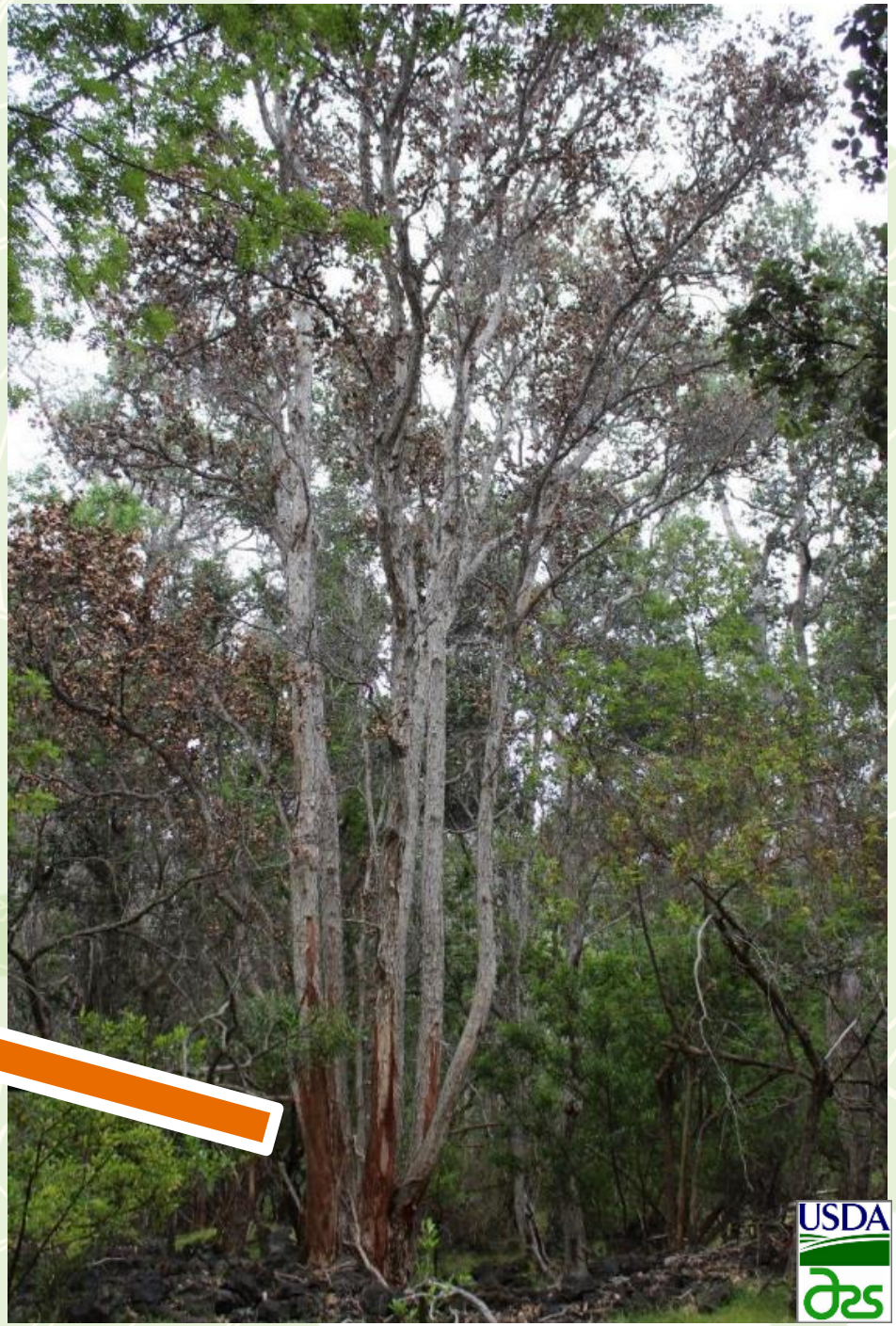
Wounds As Infection Sites

Wounded trees confirmed to be infected with *Ceratocystis*

Wade Heller



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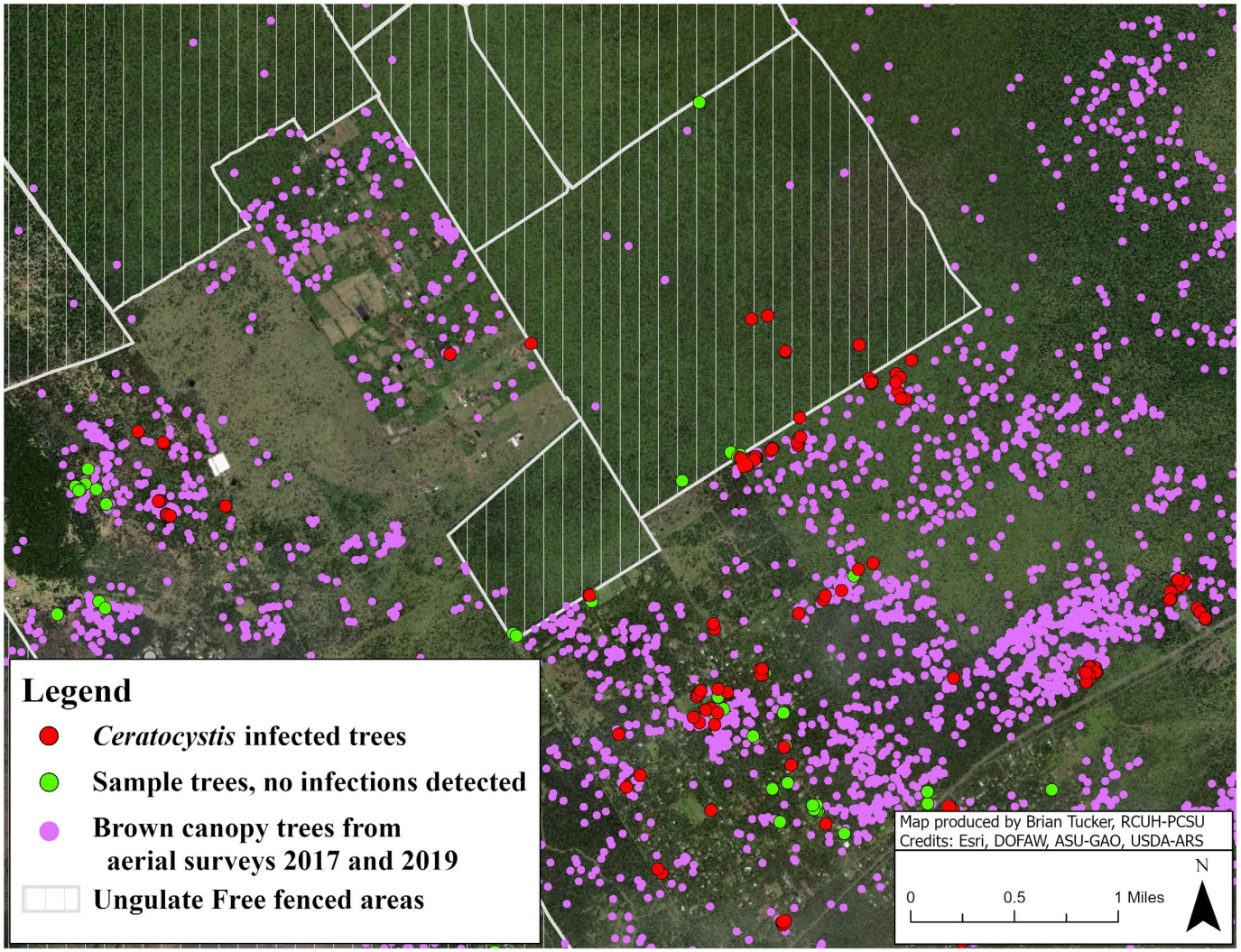
Feral ungulates, fences, and ROD



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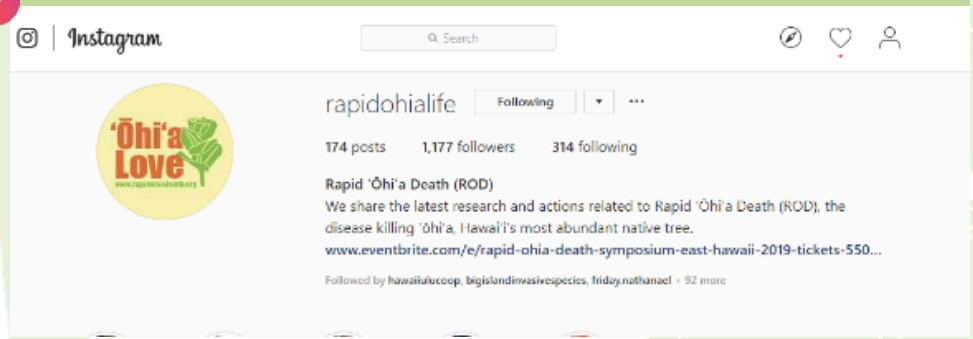
Mahalo!

RapidOhiaDeath.org

facebook.com/rapidohiadeath

instagram.com/ohialife



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