Monthly News & Updates

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April 2022 Newsletter

Invasive Species on the Hamakua Coast

An update and a promise.

Ruth Bennett,
.PMKCA VP

What we stand to lose to invasive species.

Many members of our community have worked hard in recent years to control invasive species – folks who work in Kalōpā Park to remove invasives and maintain native plants, residents who monitor for signs of Little Fire Ants (LFA), farmers and gardeners who have adopted new methods for reducing the risk of Rat Lungworm Disease (RLWD), and ranchers on the lookout for the Two-Lined Spittlebug (TLSB).

But somehow, I was the one getting a recognition and a certificate from the Hawai'i Invasive Species Council and the state legislature. All I did, especially during COVID times, was to try to keep our communities on the Hāmākua Coast informed about threats to our livelihoods and well-being from invasive pests and plants. Between the lines in the certificate, I'm reading, "Ruth! Now you've got to get busy and earn this recognition!"

So, I will be writing a regular column for readers of the Hāmākua Times to share recent or updated information, helpful suggestions, and resources available to you if you are facing an invasive species threat, or if you want to avoid one.

What is an Invasive Species, and why should we care?

Invasive species are plants or pests that have these two characteristics:

1. They arrived on our islands by human intervention (as opposed to native species that arrived by drifting or blowing here or that hitched a ride caught in birds' wings).
2. They have caused – or have the potential to cause – serious harm, to the

environment, to our local economy, or to human health.

As the islands became dependent on the transportation of goods – and visitors - by ship and plane from all over the world, the risk of new invasive species sneaking in and taking hold here has increased significantly and sometimes disastrously.

Can't we keep invasives out somehow?

There are "guards at the door" to Hawai'i (the Department of Agriculture) but their ability to check every shipment or suitcase is limited by funding and staffing – and by the sheer size of the task. While live plants are known to be the number one vehicle for the introduction of invasive species in Hawaii, we often only discover a new invasive species when it has established itself and demonstrated the damage it can do. It sounds pretty discouraging, I know.

Are there things we should do – or not do?

Sure. First, become informed. Then build your arsenal and adopt some general practices that monitor for, and control the spread of, invasive species.

1. For information and advice on the pest you're looking at, start at the Big Island Invasive Species Committee website, www.biisc.org.
2. To build your arsenal, collect what you need to identify and monitor for pests. Depending on the threat (LFA, ROD, TLSB, etc.), your tools might be different. But don't wait until the onslaught has begun to know what tools you will need, where you find them, and how to use them. To report a pest or to get help in identifying a pest, use the website, www.643PEST.org.
3. Be aware that new tools and methods are coming. Researchers at the University of Hawai'i and in various state agencies are developing and testing tools and methods for the management or eradication of invasive species.
4. Finally, ***as a BIG general rule*** – Don't move materials that might be carrying an invasive species from one area to another.

    - DON'T TRANSPORT infected materials. Don't share ROD-infected firewood, for example.
    - DON'T ACCEPT materials which might be infected unless you are prepared to thoroughly disinfect the materials when they arrive. A load of mulch or gravel may hide Little Fire Ants.
    - DON'T CARRY pests on your shoes, tools, or vehicle. A hike in the forest can bring a pest back to your home and neighborhood.

So, what Invasive Species should we be concerned about, here on the Hāmākua Coast?

You probably already know some invasives that are plaguing your lives right now. Others are currently someone else's problem but may be heading our way. So, let's get started on an overview of a few of the notables.

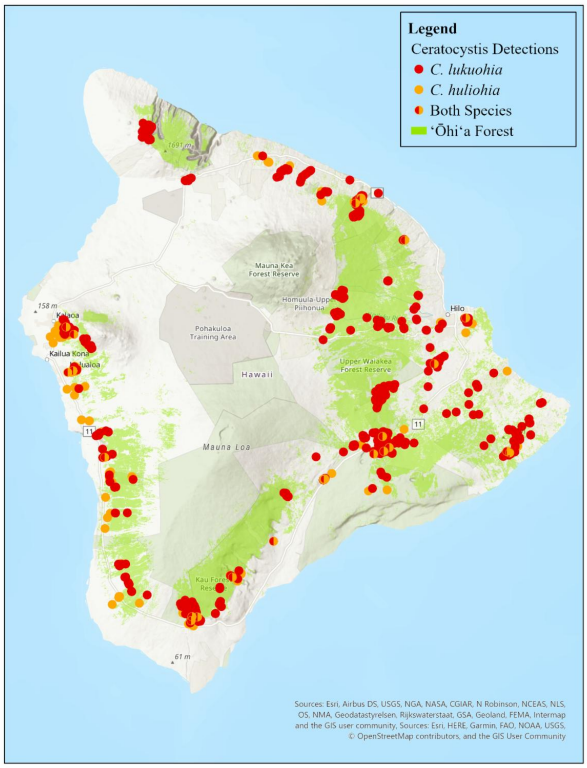
Rapid 'Ōhi'a Death (ROD)

The endemic 'Ōhi'a lehua tree, with its distinctive red flowers (occasionally orange or yellow) is a foundational cultural symbol for Hawai'i. Its flowers are used in leis that grace the movements of dancers at the Merrie Monarch Festival each year. The tree supports our natural environment by holding and directing fresh water into our aquifers and by storing carbon away from of our warming atmosphere.

ROD is here! It's killing trees in our Pa'auilo and Kalōpā neighborhoods and all along

the Hāmākua Coast.

ROD is a disease caused by a fungus that establishes itself in ‘Ōhi’a trees which have been damaged by wounds to their trunks, branches, or exposed roots. The damage may be caused by breakage in windstorms, the activities of feral pigs or livestock, or by humans and their tools and actions. The fungus spores are spread by the wind, or carried on shoes, tools, or vehicle tires.



Map of ROD sites on the Big Island. Credit: CTAHR

Recent research is focusing on the role that pigs and other ungulates play in spreading the disease in our protected forest lands. Fencing out pigs has shown to markedly decrease the numbers of infected trees and to increase the survival rate. There also seems to be a correlation between severe winds and the spread of the disease. Hurricane Iselle that hit Puna in 2014, seems to have been a major factor in the spread of ROD in the Puna and Volcano forests in subsequent years.

Little Fire Ants (LFA)

If you have them on your property, regretfully, you know all about the misery they can cause! Other areas on the Hāmākua Coast are monitoring for them and are working to eradicate any infestations before they spread.

Little Fire Ants on a popsicle stick coated with peanut butter. Credit: Hawai'i Ant Lab.

LFA are VERY tiny, red/orange ants with a very outsized ability to sting with an “electric” burning sensation. Our LFA population seems to be most related to those now found in Florida and the first probably arrived in a shipment of plants.

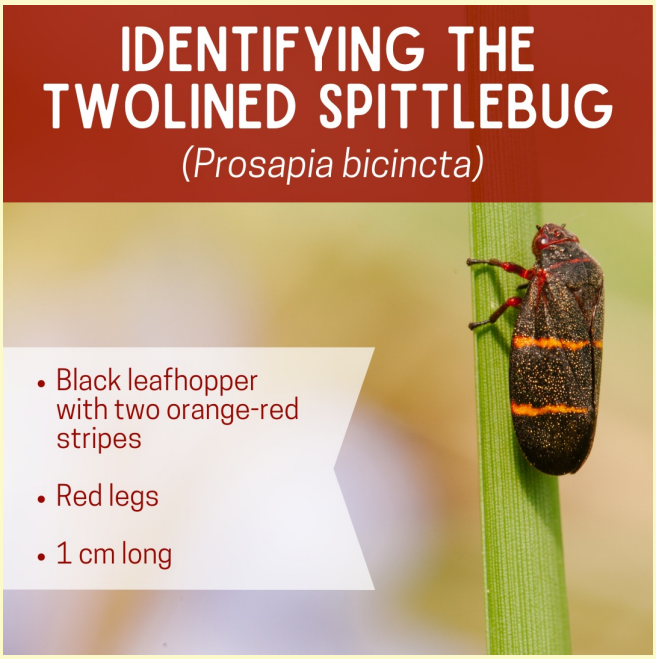
LFA aren't like other ants which nurture a single new queen or two. An LFA "super-colony" is a network of many nests, each with a cooperating queen, that work together in foraging over an area from treetops to rock walls.

Detection and early eradication are key to keeping your property free of LFA. Detection techniques involve peanut butter on sticks which attract any LFA in the area. Treatment is often done using chemical pesticides administered over a year or so. There is recent news that a parasitic wasp, using the same transport route to get here as the LFA did, and may prove to be a natural deterrent.

Two-Lined Spittlebug TLSB)

This creature, only discovered here just a few years ago, is destroying pastures in upper Kona and is headed our way. Already it has made nearly 200,000 acres of pastureland unsuitable for cattle forage. If it establishes a foothold in the rich pastures and range lands from Waimea into the Hāmākua, the TLSB will devastate our livestock-based agriculture and Paniolo culture that have characterized many of our communities for over a hundred years.

The Two-Lined Spittlebug's favorite food is also what raises our livestock – very nutritious, hardy, fast-growing pasture grasses, kikuyu and pangola.



Look out for this bug and the brown patches it creates in your lawn or pasture. Credit: BIISC

The bug's immature nymphs suck nutrients from the grass stems close to the ground while the adults (with 2 distinctive lines on their wings), eat into the higher stems. Lab tests have shown that an adult and some nymphs can turn a healthy stem of kikuyu into a dry husk in about 12 days.

It hasn't proven to be feasible to fight the creature with pesticides, even if it were a good idea, since the range lands are so large and often rugged. Most research has been directed towards finding TLSB-resistant grasses that can restore TLSB pastures and support the numbers of livestock the ranchers need for their livelihoods.

If you're down in town somewhere, what can you do? The lawn you mow around your house or the park you run through may very well be kikuyu or pangola. You may be the first to spot the arrival of TLSB to the Hāmākua. Monitor your lawn for brown patches. Search close to the ground for a frothy mass with a creature inside. You may be able to stop the spread, and the ranchers of the Hāmākua would be grateful.

Other Invasive Species

Yes, there are more. The Avocado Lace Bug, a recently discovered pest of avocado trees, has been found in our communities. We don't mention mosquitoes much, but they carry a disease that our native birds have no resistance to. And I haven't mentioned invasive *plants* at all!

Even when I might be considered an invasive myself, it is my kuleana, my responsibility and my privilege, to encourage us all to do what we can to protect our 'aina. From a small backyard to a 10-acre avocado orchard to a 100-acre ranch, we are in this together.

If you live in the mauka Pa'auilo or Kalōpā and are looking for help or want to make a difference, look to the **Pa'auilo Mauka Kalopa Community Association, www.pmkca.org.** We will be putting up an Invasive Species page soon.

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Coming PMKCA Meetings

We continue to work at the Board and committee level on behalf of our communities. If you have any interests or concerns, we encourage you to email any Board member.

PMKCA Board of Directors Meeting
Thursday, April 14, 2022, 7pm

Members are welcome. If you would like to attend, call any Board member for meeting location.

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JOIN PMKCA or RENEW YOUR MEMBERSHIP for 2022!!

Membership in PMKCA is on a calendar year basis; so, with the arrival of 2022, we are beginning a new membership drive. New members are particularly welcomed. Current members are encouraged to renew your membership in 2022.

Dues are only $20 per year - and help support so many great community activities. Click the "Visit our website" link below and choose Membership/Dues). We offer a PayPal option, or mail a check made out to PMKCA to PO Box 408, Pa'auilo, HI 96776.

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