



Pa'auilo Mauka Kalopa Community Association

Photo courtesy of Karl Backus

Monthly News & Updates

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August 2022 Newsletter



***Avocado Lace Bugs
- Bad!***

***Predatory Insects
- Good!***

***Encouraging beneficial
insects while controlling
the bad ones.***

Ruth Bennett
.PMKCA VP

*An avocado leaf with characteristic
Avocado Lace Bug damage.*

A new invasive species is threatening our local crops and home gardens, the Avocado Lace Bug. I often find it discouraging to bring yet another invasive species to your attention – but it's no fun being a gardener or farmer who finds a new pest attacking their harvest, so here's another article.

When damaging insects invade our gardens, sometimes it seems the simplest approach is to just “kill them all and let nature sort them out.” But when we eliminate all sorts of insects “willy-nilly” by using broad spectrum pesticides, we also wipe out our allies – the *beneficial* insects. Those creatures have evolved over many thousands of years to play their role in maintaining a healthy “predator-prey” balance in our gardens, farms, orchards and pastures.

So, let's consider the “good, the bad, and the beautiful” of nature in balance.

OK, the bad news first The Avocado Lace Bug is here.

New residents in the Kalōpā community recently rejoiced when they moved to their property and began to recover a neglected avocado orchard. Their dream was to produce some income from the sale of fruit from their orchard. But in the last few years, their trees came under attack by a new pest and their plans were in jeopardy.

The centers of leaves on their trees had developed yellow/brown spots, and the undersides of the leaves showed a host of small black dots (larvae and their debris) and several tiny, winged adults. An analysis identified the insects as Avocado Lace Bug (ALB).



Avocado Lace Bugs in all stages on the underside of a leaf.

The Avocado Lace Bug (*Pseudacysta perseae*) probably arrived in the islands, as so many invasive species do, on a shipment of plants. First identified on O'ahu in late 2019, within a few months, the bug had also been found on avocado trees on Hawai'i and Maui islands. In just a few years, the insect has become widespread here.

The Avocado Lace Bug in all its life stages damages the leaves of avocado trees. In heavy infestations with a large proportion of leaves damaged or dropped, the tree is unable to provide enough photosynthesis to produce an abundant avocado crop. The larvae and adults puncture the leaf and veins and draw out nutrients. The result is a leaf turned brown and brittle at its center.

All varieties of avocado are susceptible to ALB, but the experts advise that small infestations on our trees will not damage production significantly. Watch for the signs, pick off infested leaves and destroy them. Give the tree some additional nutrients and water, and encourage beneficial insects (more on them below).

The recommended treatments for ALB typically involve targeted chemical insecticides, insecticidal soaps and other biologic controls. Avoid broad spectrum insecticides to protect beneficial insects and treat after the blooming period to avoid affecting pollination. For more information on ALB, start with the Big Island Invasive Species Committee's page (biisc.org/pest/avocado-lacebug) and follow links found there.

Now, the good news: We have hosts of insects and other critters that are

voracious predators of the Avocado Lace Bug and other pests.

Already present in our gardens are various kinds of beneficial Insects that are adapted to either make their living destroying a variety of damaging pests (the *Predators*) or that are helping to produce our fruits and vegetables (the *Pollinators*). We just might not know that they are there or what their business is.

Let me introduce you to four beneficial predatory insects that are on your side in the battle with the Avocado Lace Bug. If you can recognize the “friendlies” you can encourage them to work on behalf of your avocado crop and your other home-grown produce.

The first two beneficial predatory insects are easily identified in their adult forms – the Lacewings, and the Lady Beetles (Ladybugs). The second two are very small and less recognizable – Minute Pirate Bugs and Predatory Mites.



A Lacewing and its eggs – a major predator of Avocado Lace Bugs

Lacewings: These insects are beautiful! In their adult form, they are about $\frac{3}{4}$ inch long with transparent wings and green or gold bodies. In the larval form, they look like tiny brown alligators with rough skin and big jaws. Their eggs are uniquely attached to a leaf or stem by a filament (see the photo). Lacewing adults and larvae eat a wide variety of pests, including aphids, mealybugs, white flies, and Avocado Lace Bugs. If it's a soft-bodied pest, the Lacewings will feast on it.

Lady beetles: They are familiar to most of us. Small, red VW Beetles with legs. Their larvae also have a rough alligator-like appearance. A species (*Cyclomedusa sanguinea*) with solid red wing coverings (no spots) was introduced to Hawaii to help control damaging soft-bodied insect pests. When the Avocado Lace Bugs arrived, the Lady beetles were waiting for them!

Minute Pirate Bugs: These insects are very small but voracious and will eat any pest that they can get a grip on. The adults are less than 1/8 inch long with X-shaped markings on their wings. The nymphs are smooth, shiny and teardrop shaped. The nymphs are as ferocious as the adult form. Setting one or two nymphs into a patch of Avocado Lace Bugs and the leaf would likely be cleared in one day.

Predatory mites: They are the tiniest warriors... mighty mites! Technically, they are not insects; they are more closely related to spiders. Because of their small size and large numbers, they can reach areas of infestation when other insects and methods of control aren't effective. They are described as "among the most successful bio-control agents." It may be hard to tell a predatory mite from a plant-damaging spider mite, but their behaviors are very different. The spider mite will attack plant material, but the predatory mite will attack the spider mite. Get out your magnifying glass and see what a tiny creature is up to.

Most insects that inhabit our gardens aren't destructive. 95% of insects are benign – just going about their business, sometimes taking a few harmless bites out of a plant we cherish, sometimes chowing down on another damaging insect, sometimes playing a vital role in pollination.

Effective control of the Avocado Lace Bug and many other destructive pests in our gardens often comes down to understanding and appreciating the roles that various creatures play in a healthy web of natural life. When we apply a "scorched earth" policy to our gardens, we destroy that web. The consequences rarely result in what we were hoping for.

And finally, the beautiful part: Nature in balance.

When we work within the web of life in our gardens, we encourage a healthy, balanced, and diverse environment in which our avocado trees and other crops can thrive. So, thank a bug for your ripe avocado – or thank the bug that ate the bug that would have damaged your avocado tree!

More information on the Avocado Lace Bug:

- <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-50.pdf>

More information on predatory insects that attack the Avocado Lace Bug:

- <https://www.ctahr.hawaii.edu/organic/links.html> (scroll down to "Pest Control")

Coming PMKCA Meetings & Events

***Look for information coming soon regarding a
Community Clean-up Day!!***

On a Saturday in late August or early September, we will be inviting our members and friends to join a morning stroll down our local roads collecting trash and identifying traffic hazards. More news is forthcoming!

Our Annual Picnic Meeting (Saturday, July 30) was a happy success!

If you missed it, look for a short summary coming soon!

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## ***Welcome, Fred Alexandre, our new Water, Health & Utilities Committee Chairperson***

Fred Alexandre, a new property owner in our community, has volunteered to take the position of Chair of our Water, Health & Utilities Committee. The position has been vacant since the resignation of our honored member, Jami Sales. Fred is a poet and abstract artist. He and his wife, Amy, will be constructing a home soon on Ho'o Kahua Rd.

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Oh, and by the way, Join PMKCA or Renew Your Membership for 2022!!

Mahalo to those of you who renewed your membership at the picnic meeting!

If you missed that chance, 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, PO Box 408, Pa'auilo, HI 96776. Easy-peasy - and important!

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