$4.95

HAWAII landscape

November/December 2021

THE VOICE OF HAWAII'S GREEN INDUSTRY

HAWAIISCAPE.COM

# LEARN FROM THE ARBORICULTURE EXPERT: ERNEST H. REZENTS

# DESIGN INSPIRED BY NATURE

# BRANT BROWN AND HAPA LANDSCAPING Q&A ON SUCCESS IN HAWAII

# HAPPY 45TH ANNIVERSARY AAA

Photo by Micah Baker

PRST STD
U.S. POSTAGE
PAID
PERMIT NO. 5377
DENVER, CO

Landscape Industry
Council of Hawai'i - Foundation
P. O. Box 22938
Honolulu HI 96823-2938

EARTH PRODUCTS
HAWAIIAN
100% NATURAL

# WE ARE HAWAIIAN EARTH

## COMMITTED TO KEEPING HAWAI'I SUSTAINABLE

65-1101 Wilikina Drive
Wahiawa, HI 96768

(808) 682-5895
hawaiianearth.com

Proudly self published by

LICH
Landscape Industry Council of Hawai'i

Formed in June 1986, the Landscape Industry Council of Hawai'i is a state wide alliance representing Hawaii's landscape associations: Aloha Arborist Association, American Society of Landscape Architects Hawaii Chapter, Hawaii Association of Nurserymen, Hawaii Island Landscape Association, Hawaii Landscape and Irrigation Contractors, Hawaii Society of Urban Forestry Professionals, Kauai Landscape Industry Council, Maui Association of Landscape Professionals, Professional Grounds Management Society, Big Island Association of Nurserymen, and the Hawaii Professional Gardeners Association.

Hawaii Landscape Nov/Dec. No. 63
is published bi-monthly by
Landscape Industry Council-Foundation,
73-1110 Ahikawa Street, Kailua-Kona, HI
96740

**Editors**
Russell Galanti
Hannah Lutgen
Chris McCullough

**Advertising Sales**
Michael Roth
rothcomm@gmail.com

**Executive Director**
Garrett Webb
palmsinkona@yahoo.com

**Designer**
Roann Gatdula



# contents

## DEPARTMENTS



## FEATURES



## COVER






# PRESIDENT'S LETTER

BY CHRIS McCULLOUGH

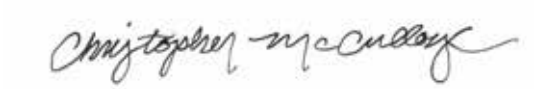
## KŪLIA I KA NU‘U! (STRIVE TO REACH THE HIGHEST!) QUALITY WORK AND HIGH STANDARDS IN OUR GREEN INDUSTRY

We have all seen it. To save a little money the homeowner hires the mow, blow and go guy to top the mango tree. And to do it cheap and quick the guy does a hack job, leaving the tree leafless and distressed, never again to regain its natural form. Or we've observed the landscape installation where 'to save a few bucks' the homeowner hires the cheapest guy and he skimps on soil depth and quality, installs a substandard irrigation system and landscape design that is 'wrong place, wrong plant' and you think 'that garden is not going to thrive'. That's why it is so important for us as a Industry to perform quality, high standard work. Our clients want and deserve the best, and sometimes you must enlighten them that to get that it costs more, but in the long run their satisfaction with a thriving garden will be worth every penny!

In this issue we focus on Landscape Contractors and Arborists. I had the privilege of speaking with two successful landscape contractors in our Industry, Micah Barker and Brant Brown. In my Q&A interview with them I saw they both had the vision to be the best, and that was the key to their success! We need high standards and comparable pricing in our Industry so we can all make a decent living. As Micah Barker stated "Landscaping is a tough, demanding industry. I would advise to ‘know your numbers’ and price yourself correctly, to know your value. It’s very expensive to be a licensed legitimate landscape contractor so charge your clients accordingly."

So many times I have had fellow Industry members bemoan the issue that too many in our field under bid jobs, under pay their workers and do substandard work, and how it negatively affects their ability to make a decent living and profit. Underbidding just to get a job hurts everyone in our Industry.  Price your work according to the value of your quality work. Advise your clients that quality does cost more but sell them on the value of a well designed and executed landscape as opposed to a 'done on the cheap' garden. When it's time to prune out the signature mango tree in their garden, advise your client to hire a qualified arborist to do the job. The results will be both aesthetically pleasing and from the tree and arboricultural perspective sound and experienced work. Sell them on the value of quality work, so the result is not a cheap and disfiguring hack job, so the mango tree thrives for years to come. Our beautiful trees are treasures and should be treated accordingly!

The words of our Queen Kapi'olani ring true! We must strive to reach the highest in our endeavor to further beautify Hawa'ii Nei. It is our duty to raise the standard so that we can all thrive in our businesses as well as in our gardens! Kulia I Ka Nu'u! Let's all strive to be our best!



# Leadership Opportunity for the Landscape Industry

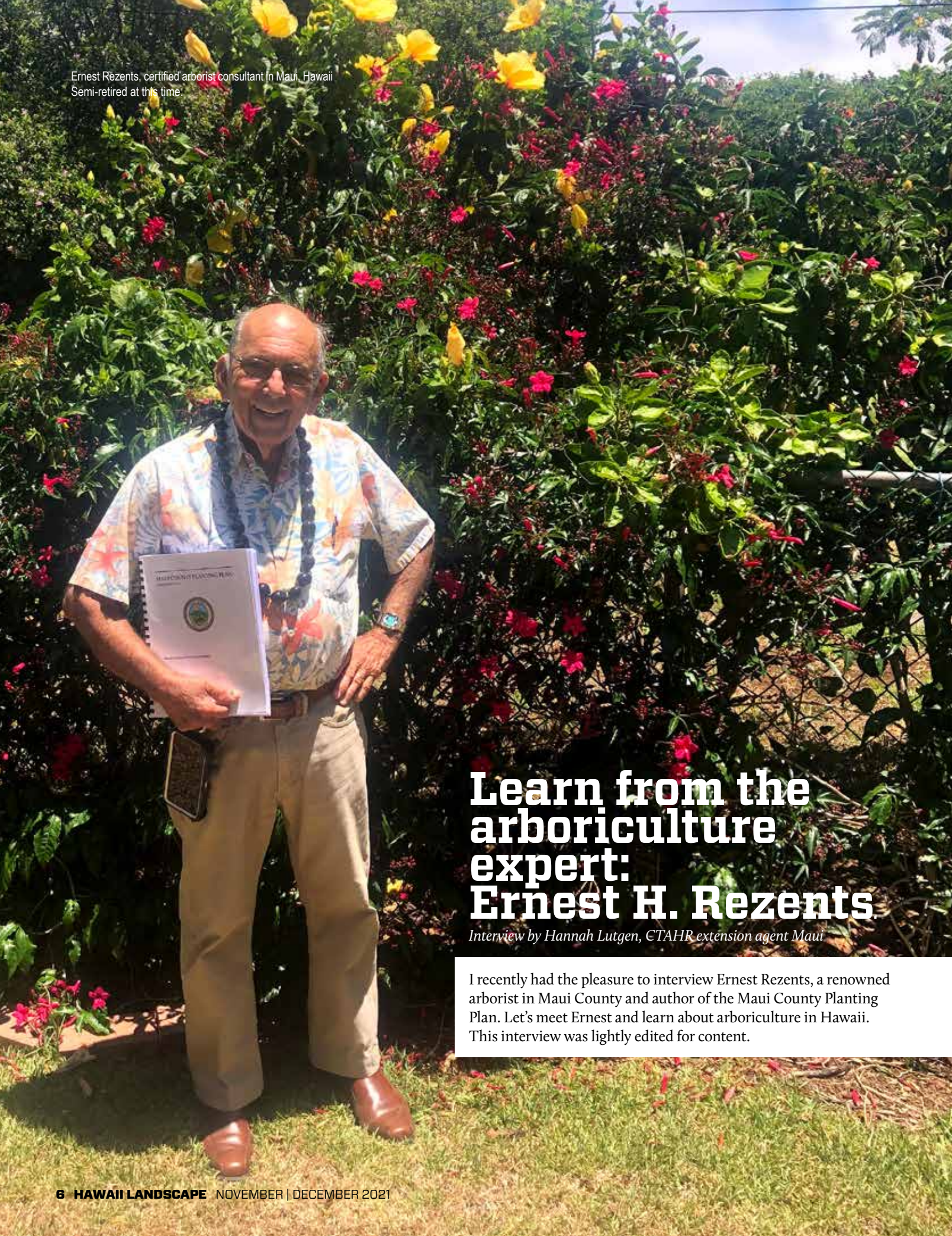
*By: Christine Brammer*

## Executive Director – Ag Leadership

The Agricultural Leadership Program (ALP) is a signature program of the Agricultural Leadership Foundation of Hawai'i (ALFH), a non-profit organization with deep roots in Hawai'i. ALP is for promising leaders from Hawai'i's agricultural, natural resource management, and rural community sectors. Since its inception in 1982, ALP has graduated over 185 leaders that are positively impacting Hawai'i agriculture and their communities. A handful of these leaders have been from the landscape industry and it's time for there to be more!

The next class of ALP will be offered in 2022 (schedule TBD).

Find out more about the program and learn how to apply at: https://www.agleaderhi.org/agricultural-leadership-program/



Ernest Rezents, certified arborist consultant in Maui, Hawaii
Semi-retired at this time.

# Learn from the arboriculture expert: Ernest H. Rezents

*Interview by Hannah Lutgen, CTAHR extension agent Maui*

I recently had the pleasure to interview Ernest Rezents, a renowned arborist in Maui County and author of the Maui County Planting Plan. Let's meet Ernest and learn about arboriculture in Hawaii. This interview was lightly edited for content.

Q. Hello, thanks for meeting with me. Please tell us a little bit about yourself.

EHR: I was born and reared in Maui. I attended St. Anthony's school for 12 years and the University of Hawai'i at Mānoa (UH Mānoa) for 5 years where I studied education. I taught math and science at Honoka'a and Waipahu High School. I went back to the UH Mānoa and took physics and biology. Then I taught technical physics, trade science and electricity to train people to become journeyman electricians at Maui Technology School. Then I studied botany UH Mānoa. I returned to Maui and taught botany, physics, trade science part time, and electricity at night for the apprenticeship program at the Maui Community College (MCC). I went to Stanford University and studied physics and science education for a summer-this was an eye-opening experience. I returned to Maui to teach botany and physics at MCC. Towards the end of my MCC career, there was a need for landscape training. I obtained state funds to build a greenhouse and a classroom building furnished with microscopes, etc. and start a horticulture program. Joeseph Souki, a member of the Hawaii House of Representatives, helped finance this project. A greenhouse was installed, and I taught the horticulture program full time. I went to University of Oregon to get a Master's Degree in biological sciences and enjoyed this tremendously. I also studied arboriculture at University of California Davis. Afterwards, I returned to Maui and taught arboriculture to prepare individuals to take the exam to become a certified arborist.

Q. How long have you been working as an arborist?

EHR: I have been a certified arborist for 26 years now. In 1995 I became a certified arborist. After 5 years as an arborist, I attended a workshop sponsored by American Society of Consulting Arborists (ASCA) which gave me the credentials to be a registered consulting arborist. In that preparation I studied legal and became an expert in tree evaluation, report writing and expert witnessing pertaining to tree issues.

Q:What do you enjoy about arboriculture?

EHR: I am amazed how such a big specimen can grow from a seed. Trees provide us with fruit, flowers, shade, and numerous environmental benefits. Research has indicated that hospital patients that have a view of trees from their room have a quicker recovery time compared to patients without a view of trees. Also, research suggests that people will travel further, stay longer and spend more money if there are shade trees in the parking lot where they park to shop.

Q. What are the biggest challenges in the arboriculture industry?

EHR: Topping trees. When the tree crown is removed you lose all the benefits of the crown such as shade, oxygen, fruit, and wind protection. People top trees to make it short because they are too big and treacherous. People should prune trees annually but do not remove more than 25% at one time. This pruning needs to be done by an ISA certified arborist that adheres to arboricultural principles.

Q. What is the arboriculture industry currently doing well?

More and more certified arborists are being hired. People are recognizing that such training is important. Certified arborists should have liability insurance, know how to make proper cuts, and be equipped to climb trees without spikes such as using ropes and/or a boom.

Q. The Maui County Planting Plan (MCPP) contains a wealth of information. Will you please briefly explain what Maui County Planting plan is and how landscape architects and arborists across that state of Hawaii can utilize this information?

EHR: The Maui County Planting Plan is a guide that can help anyone select a tree to fit their environment and needs, and learn how to plant, stake, prune, water and maintain plants. This plan contains specific information and characteristics about a variety of trees, groundcovers and turf grass listed by scientific and common name. There are no invasive species in this guide. People can use this guide to find helpful information about installing parking lot trees, planting and pruning trees with illustrated pictures.



To me, the island planting zones are key. Robert Hobdy (an exceptional botanist) developed these planting zones based on rainfall and temperature for Maui County. However, these planting zones apply to all of the islands. To find your zone, refer to the maps and tables on pages 11-14 in the Maui County Planting Plan to determine which plants are suitable for your location.

Q. What are your favorite street trees, shade trees and trees for parks, greenways, or open spaces?

EHR: For street trees, I love shower trees (*Cassia sp.*) they are beautiful and not too big. Monkeypod trees (*Samanea saman*) are big and provide great shade, but they can be expensive to prune.

Nevertheless, monkeypods provide numerous benefits, they can increase property value, provide shade in parking lots, and create a welcoming approach for shoppers and homeowners.

Q. Will you please provide advice for coconut palm tree pruning and explain the figures?

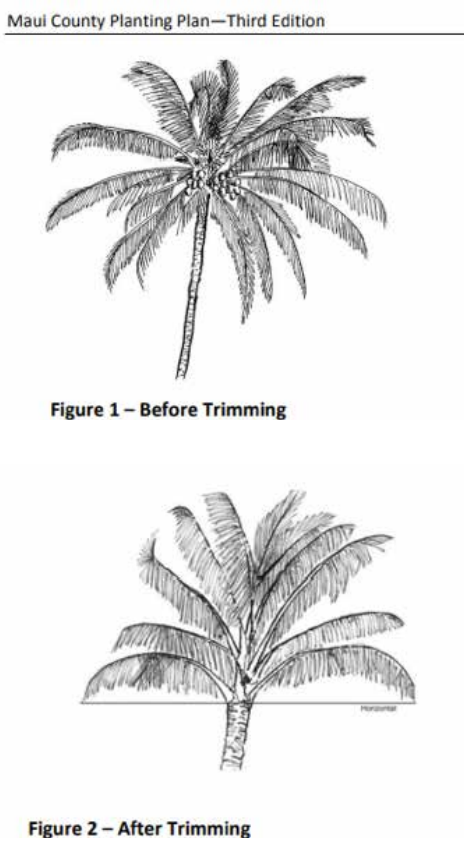



Figure 1 – Before Trimming

Figure 2 – After Trimming

EHR: In the past, coconuts were pruned from 10 to 2 (bolohead) meaning that everything below the 10 o'clock and 2 o'clock position on the tree was removed. Now, as in the figure 2 above, people remove the lower fronds so that the tips of the upper fronds fall from 9 o'clock to 3 o'clock, which is preferred for the benefits in the crown. The leaves are food factories for the tree, allowing the tree to draw water and produce carbohydrates from carbon dioxide leading to trunk expansion.
When you over prune a coconut, it can cause an hourglass like, narrow section in the trunk due to a lack of vascular tissue, the water and food conducting tissue needed for normal expansion. After the tree grows and produces adequate fronds the coconut trunk will return to the normal trunk diameter.
Monocots, such as palm trees, have a terminal cambium situated on the growing tip.

Once monocots reach a certain size and growth the trunk expansion ceases. In comparison, woody dicots expand throughout their lifetime because the cambium is situated below the bark and phloem and above the xylem so the whole trunk may continue to expand.

Q. What are your thoughts regarding spiked and spike less climbing?

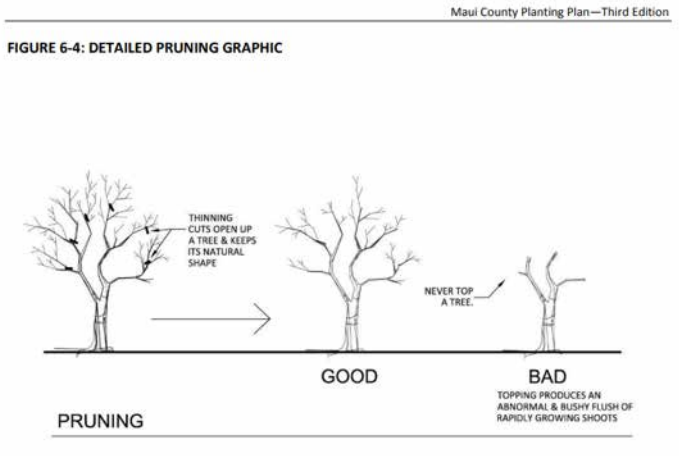
EHR: In my opinion, using spikes to climb trees causes injuries on trees, which may affect the capillary function of the xylem and create a wound where fungi and bacteria can enter. Instead of using spikes on broadleaf trees, use ropes or equipment with bucket trucks. Spike less pruning on palm trees is commendable. The use of a climbing platform or a bucket truck, if there is adequate space available, are great options to prevent tree injury.

Once you wound a palm tree, that wound will never heal, it will always be visible. Tourists have asked me, why are these palm trees full of holes? I tell them it's because of spiked climbing.

Q. What advice do you have for new or learning arborists?

EHR: Study and follow the International Society of Arboriculture (ISA) guidelines and become a certified arborist. Study and follow the International Society of Arboriculture (ISA) guidelines and become a certified arborist. Do good work and maintain health of canopy and the tree. Trees provide essential benefits to all animals and people. They are our best friends."

Q. Will you please briefly explain this figure?




EHR: Before pruning a tree, assess tree and remove branches that are decayed, rubbing or extremely long. Thinning extremely long branches on a mother branch creates space for light penetration, increases air flow and decreases weight load because excessively long branches may snap off. The good picture represents a well-maintained canopy with adequate branches and leaves. The tree in the bad picture is defoliated and will struggle because leaves that create energy and food for the tree are absent.
The tree benefits are in the canopy. Typically branches originate at the growing tip of the tree, and therefore as the trunk expands it engulfs or grows around this branch to provide good attachment to the tree. If you top a tree frequently you will have a lot of branching occurring from the cambium just beneath the bark opposed to the cambium in the trunk or growing tip so these branches will be attached weakly to the trunk and more susceptible to drop or break.

Thanks for your time Ernest!
*For more information, please read: Maui County Planting Plan, MCPP 2015 Third Edition (mauicounty.gov) mauicounty.us/wp-content/uploads/2014/10/Planting-Plan-Third-Edition.pdf*

It's waterproof

# FERROXX® AQ
SLUG AND SNAIL BAIT




## Ferroxx AQ stops snails and slugs which can spread rat lungworm disease.

**These highly waterproof micropellets can be used around pets and wildlife.**

**For use in and around taro, nurseries, landscape and most agriculture crops grown in Hawaii. Residue exempt.**

NEUDORFF®
Neudorff North America



250-652-5888 • **Neudorff**Pro.org

Simple and elegant David Tamura designed landscape installed organically by Bioscape Hawaii

# Micah Barker - Design inspired by *nature*

*Interview by Chris McCullough*

Micah Barker has been a friend and colleague of mine for many years, as we both served as officers on the Hawaii Island Landscape Board. I have watched Micah and his company grow over these years and truly admire his design and landscapes. We had the opportunity to 'talk story' about the rising growth of his company and his honorable intentions to create landscapes that take care of the earth and address the restoration of our planet.

CM: So did you grow up here on Hawaii Island Micah?

MB: Yes, I was originally born in Little Rock, Arkansas, moved to the East Coast at three and then moved to the Big Island when I was nine years old. My parents had intended to continue on to New Zealand but loved Hawaii Island so much that we stayed.

CM: And you attended Parker School in Waimea?

MB: Yes, and graduated in 2002. After that I considered college but felt that college 'trains you to be a worker' so instead decided to gain real world experience or 'street smarts' and ended up becoming self employed and eventually starting my own company. In addition to working on my own, I also apprenticed under my father in construction, equipment operation, and carpentry. With a thorough understanding of the home construction process I then went on to found Bioscape Hawaii a landscape contracting company in 2011. I had never worked for a landscape company and so in order to license the company I brought in a high school friend, Tommy Tamasese, on board as a partner and to serve as the RME. As Brenda Lam's son, Tommy had been raised in the landscape design and construction business and brought many years of experience to the table. After running the company for 6 years, I then applied for and got my own contractors license.

CM: And how did you come up with the name Bioscape Hawaii and what was the driving inspiration for your company and the type of forward thinking design that you do?

MB: Well being of the 'Green Generation', I envisioned a company that brought value to our community by honoring the earth and restoring our planet. After High School I studied Permaculture Design and became certified both as a designer and instructor, so I decided to integrate permaculture techniques into the conventional landscape industry. Nowadays it's an emerging trend called regenerative landscaping.

CM: Yes, that's very admirable, your understanding of and connection with the natural systems Micah. Can you tell me more about 'regenerative landscaping'?
MB: So our company Bioscape Hawaii only does landscape design and construction, and we specialize in efficient design for dry climates. Specifically, the dry west side of Hawaii Island. We are introducing and promoting a new design approach for Hawaii called 'Tropical Xeriscaping,' where you utilize plant material that resembles and connects with the tropical look but is also drought tolerant. I've found that you get the most efficiency out of a landscape when you dial in the synergistic relationship between the plants, soil blend, and irrigation technique.You get the most out of the landscape when these elements are harmonious.

CM: And how do you accomplish that Micah?

MB: We create our own organic soil blends that hold the moisture, retain it, where most soil blends are designed to drain it. By utilising this soil mix along with drought tolerant plants, infrequent watering (we really make the plants work to get their moisture), and highly efficient irrigation systems we have found the plants develop super robust root systems which creates strong, healthy and disease / insect resistant plants in our landscapes. We also utilize small and functional lawns in our designs to minimize water use.

CM: That's awesome Micah, very forward thinking from a design standpoint!

MB: Yes, our objective is to mimic the functioning of a natural ecosystem in the built landscape environment. And our landscapes thrive as a result. My main purpose for creating landscapes through Bioscape was to have a company that was adding value back into the community by doing work that is earth regenerative, to create landscapes of intelligent design for the dry environment.

'El Toro' Zoysia turf, Ixora 'Nora Grant', and Cabadae palms compliment these white concrete walkways perfectly.

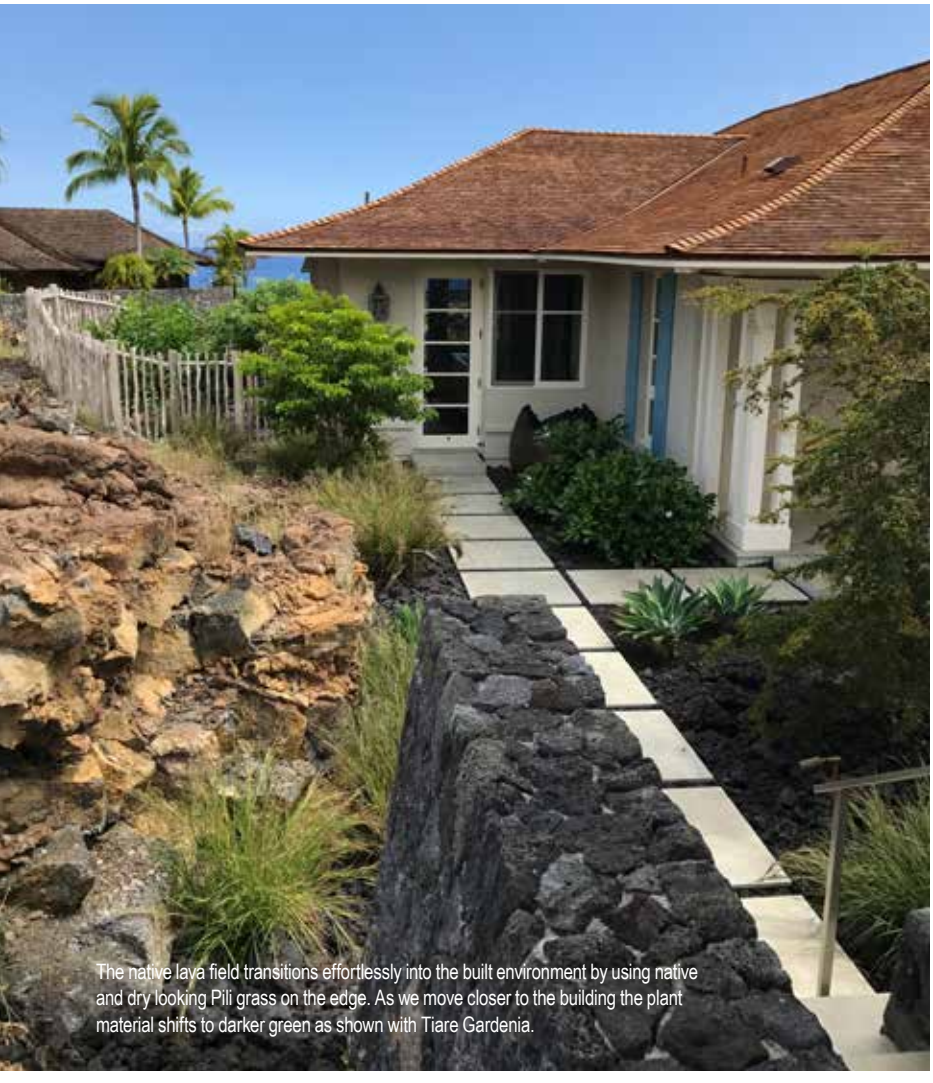
Agave attenuata, Furcraea foetida, Wax ficus, and Naupaka make a great low maintenance and visually interesting plant palette.

Cabadae palms, dwarf singapore plumeria, and Dwarf Carissa 'Jenny' frame this courtyard entrance.

A xeric approach with crushed stone, boulders, purple lantana ground cover, Blue Dianella, and Furcraea foetida

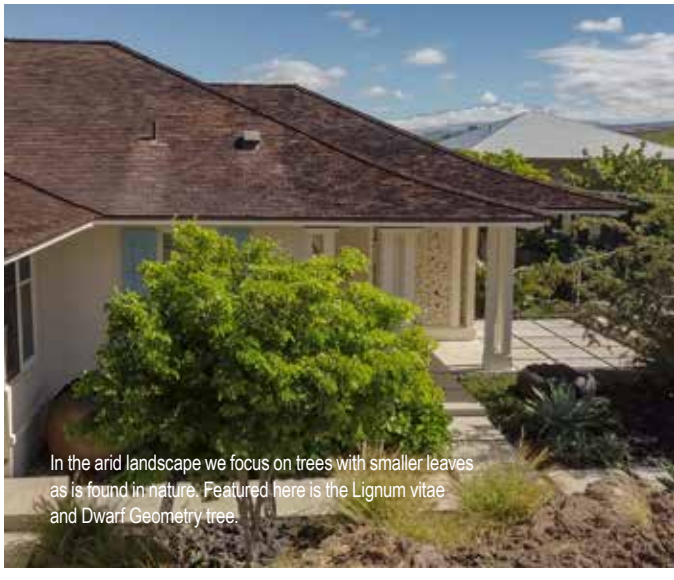
The Beach Heliotrope tree connects this landscape to the coastal landscape in the distance. The synthetic turf provides the visually pleasing look of a lawn without the ongoing water, maintenance, and chemical use.

Night time lighting of an entry courtyard that integrates both a tropical as well as xeric approach.
They key here is a water retaining soil blend that is watered infrequently, resulting in a tropical yet drought tolerant landscape.



The native lava field transitions effortlessly into the built environment by using native and dry looking Pili grass on the edge. As we move closer to the building the plant material shifts to darker green as shown with Tiare Gardenia.

A large decorative lava bowl set in a carpet of Dwarf Carissa 'Jenny'. Plant palette includes Dwarf Geometry Tree, Agave attenuata, Pili grass and Tiare Gardenia



In the arid landscape we focus on trees with smaller leaves as is found in nature. Featured here is the Lignum vitae and Dwarf Geometry tree.

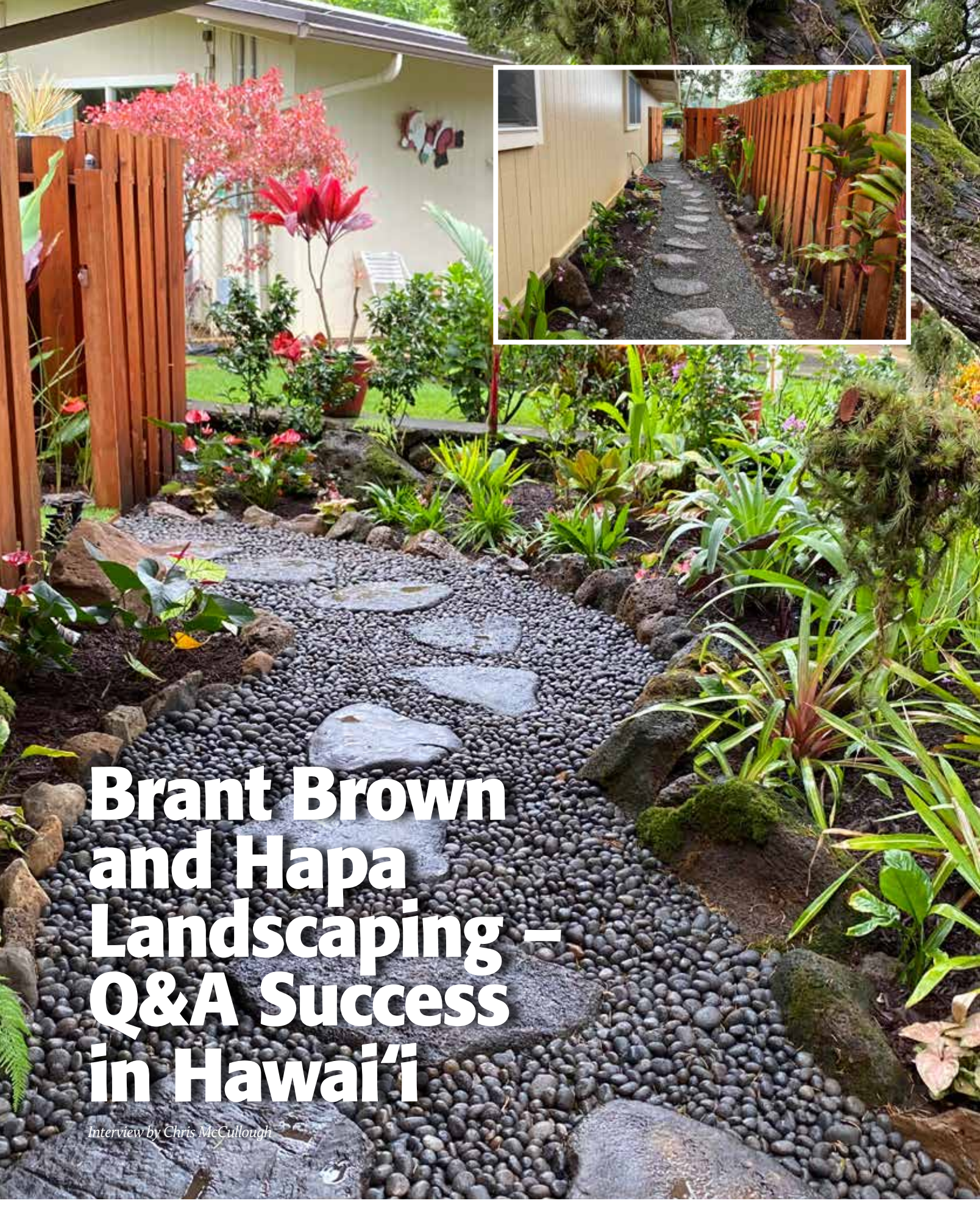
An illustrative draft of the Conservation Landscape Design prepared by Molly Scheufler at Bioscape Hawaii.

CM: What advice would you give to newbies in our industry?

MB: Landscaping is a tough, demanding industry. I would advise newcomers to mechanise their operation as soon as possible (ie motorised wheelbarrows, mini excavator and skid steer, jack hammers etc.) so to assist in the operation efficiently and assist in the longevity of your crew by giving them the tools they need to operate in the heated environment of Kona. I would also advise to 'know your numbers' and price yourself correctly, to know your value. It's very expensive to be a licensed legitimate landscape contractor so charge your clients accordingly.

CM: Good advice! Any signature projects you would like to bring to our attention?

MB: Yes, the included photos show some of our best examples of the design aesthetic we are going for - beautiful while also being very low water, low maintenance, and chemical free. Our projects span across the leeward dryland communities of Kohala Ranch, Mauna Lani Resort, Hualalai Resort, and Kuki'o Golf and Beach Club. I should mention that the Hualalai Resort Project was designed by renowned Landscape Architect David Tamura, and installed in our holistic method by us, Bioscape Hawaii.



# Brant Brown and Hapa Landscaping – Q&A Success in Hawai'i

*Interview by Chris McCullough*

For this focus issue of Contractors in Hawaii Landscape we are featuring local landscape entrepreneur (and LICH Secretary) Brant Brown and his company Hapa Landscaping. Brant and I met at his Waialae Avenue storefront recently and I was also introduced to one of Hapa's Landscaping's co-owners Victor Agostini. It's a family affair at Hapa, as the company was founded by Brant, an Indiana native, and two native Argentinians, Victor and Santiago Montone. All three met ten years ago at their canoe club as they all paddled together. Both Victor and Santiago came from farm backgrounds in Argentina and Brant intriguingly had found interest in horticulture from being a baseball player and from that having an interest in turf and field management. Here's our conversation about baseball, horticulture and the growth of Hapa Landscaping:

CM: How did you get your start in the Green Industry Brant?

BB: Well it started for me when I was a student athlete at Indiana Tech. I was born in Kokomo Indiana and was on the Indiana Tech baseball team. My course of study was Business Management but I was intrigued by sport field / turf management as a player. When I moved to Hawaii I was initially in the hospitality industry but it didn't really hold my interest so I got into landscaping initially as a laborer. After I learned the ropes I saw an opportunity to create my own company based on core values of excellent customer service and the modernization of the contracting process. We were one of the first landscape companies in Honolulu to be more technology driven, utilizing a process that allows for more interaction with clients through computer based interaction. Our designs are computer renderings. We also have an excellent web site and on line presence. This model has worked well for us in times of Covid as well as that in person meetings are now limited. I even had a recent interaction with a client where the entire process was done via the computer. We definitely saw and addressed the need for higher tech in our industry and in our process.

CM: How did you come up with the name Hapa for your business

BB: I initially named it after my son Hudson who is my hapa child but also it was a reflection of the coming together of the Argentinians and myself, a blend of cultures and experience. It's also easy to remember and looks great on our logo, a bit of local culture one might say!

CM: What services does Hapa Landscaping offer?

BB: We are very diverse in our service offerings. While primarily a landscape construction firm, we also offer design, residential and commercial landscape maintenance, environmental management and tree service. I run the business development part of the business, while Santiago is responsible for project development and Victor heads environmental management. We also have an excellent team of managers who handle the maintenance, construction and tree service business.

CM: You are the exclusive representative for Synlawn on Oahu. How did that business evolve?

BB: We kinda fell into that one as the original representative hired us to assist in an installation and was so impressed with our quality that when he retired he offered the sole proprietorship to us. It just took off from there. That is why we are one of the only landscape businesses on Oahu to have a storefront, as we want our potential Synlawn clients to really see the variety and quality of our artificial turf products.

CM: I recognize that the artificial turf business is growing rapidly and that with future water restrictions it will continue to grow. Would you like to comment on that?

BB: Yes, we have seen excellent growth and see tremendous future potential for this sector of the industry.. Synthetic turf has come a long way since Astroturf (which incidentally is the original parent company of Synlawn). The appearance and quality are now really quite amazing that it takes a trained eye to know it's artificial. And the new 'Green' trend is to manufacture bio-based (soy) artificial turf to avoid use of petroleum. It really is a green way to go when you consider all the pluses, water conservation, less need for gas powered maintenance equipment and practicality in high traffic situations like parking lots and heavily used public areas. There are even full golf courses now that utilize artificial turf! With water becoming a more valuable commodity in the future we believe that this facet of the industry will definitely continue to grow.

CM: What will be the future focus of Hapa Landscaping?

BB: We would like to increase our focus on commercial landscape construction, as we see strong growth in this sector of our industry.

CM: Any signature projects you would like to cite for our readers?

BB: Yes, we have a number of projects we feel we successfully completed that I have included photos of for the readers to see. We take pride in our quality, that's for sure!

CM: Any advice for newbies in our industry from a person who is now considered a successful professional veteran of our industry?

BB: Work hard, be cutting edge and be a positive part of the industry. And be a professional, that's my key to success!

# Making the Money Go Further:
## Creative collaboration in Albizia removal contributes to public safety on the Big Island

*By Franny Brewer, Communications Director and Molly Murphy, Plant Pono Coordinator*

While this albizia is enormous, it's not a 'hazardous tree' because it poses no danger to the infrastructure below. Kristen Hofer applies a small amount of Milestone to each hack.

When lava flowed through lower Puna in the summer of 2018, landscapes changed dramatically overnight. Although the district itself is as big as the island of Oahu, only a handful of roads served to provide residents access to many areas, and many of those were lost or cut off during the eruption. Kahakai Boulevard, already a well-traveled road through crowded residential neighborhoods, became a critical route providing the only available point of exodus for these areas. Unfortunately, this same road was lined with thousands of invasive, weak albizia trees. In 2014, Puna had experienced hurricane-level damage from Tropical Storm Iselle, due to the impacts of hundreds of falling albizia. Another such storm could cut off hundreds of people - potentially while trying to evacuate from a lava flow.

Since 2014, the Big Island Invasive Species Committee (BIISC) has been working with arborists on Hawaii Island to protect roads, electric lines, and other infrastructure from towering albizia. This year, funded by a state grant-in-aid from the Hawaii Legislature, BIISC teamed up with Mike Krauss of Tree Works, Inc. to tackle Kahakai Boulevard. This project was one of the 18 top priorities identified in the multi-agency Albizia Hazard Mitigation Plan developed after Tropical Storm Iselle hit the island in 2014, several of which have already been completed by BIISC and their partners.

**Contracting**

The creative partnership between BIISC and Tree Works saved time and money for all parties involved utilizing each entity's expertise to the fullest. As Krauss explained, the contract is the most important element in setting up a successful project of this size. To any entity looking to undertake a large-scale removal project, he advises, only work with licensed contractors who are certified arborists. Krauss, who earned his certification as soon as it became available in 1993, points out that certified arborists have committed to ongoing education and training to become professionals within their trade. Obtaining an ISA Certification demonstrates the diligence to learn- and finish- a difficult undertaking. Secondly, Krauss suggested, check the references of the company before signing any contract. Make sure that the contractor you are considering has experience with the type of project you are planning: that level of expertise can help avoid costly problems. Check to make sure they are insured, as any professional arborist should be. Although in some cases, contracts insist on bonds, Krauss explained this was not necessary for a project like Kahakai. When an insured contractor is removing the trees, if damage occurred, insurance would cover the damage. On the other hand, finished products that could deteriorate certainly would require bonding.

**Preparation**

BIISC staff with backgrounds in professional forestry and years of albizia removal experience did the initial legwork of the project. The first step was to assess the trees in the project area. Bill Buckley, Forest Response Coordinator, and Springer Kaye, Program Manager, walked the entire length of Kahakai and mapped all albizia within 100 meters of the road. Next, judgments were made on how each tree would fall after herbicide treatments. However, assessments weren't tied to a hard limit of diameter and height. Instead, a more nuanced evaluation of proximity to homes, utility lines, or roads, and likely direction of fall, was used to decide which crew controlled that particular tree. Hazardous trees that directly threatened infrastructure would be felled or trimmed by Tree Works, and those a safer distance away were controlled with herbicide by BIISC crews and allowed to decompose in place. Many of the lots in the subdivision are unoccupied, with no structures nearby, allowing for potential treefall that would not cause damage. All trimmed trees and stumps would receive herbicidal treatment from BIISC. Herbicidal control of albizia is extremely fast and easy and can be done at a fraction of the cost of felling and removal. Thus, evaluating each tree for the cheapest method could help make the grant money go much further than a blanket contract for removal.

A handful of the trees were in the easement, but as the canopy of a single full-grown albizia can cover a quarter acre, many of the hazardous trees were on private property. It was necessary to obtain permission from landowners. Because of the work that BIISC does in removing invasive plants across large areas, this was a task the team was well suited to do. BIISC has been working for years to raise awareness about albizia hazards, as well as working in and with the residents of Puna on controlling the trees. The established relationships made it easy to work with the residential associations, who were happy to help facilitate the projects through promotion and providing staging areas for the work. Individual property owners benefited from no-cost albizia-removal (a service that can cost thousands per tree). For absentee landowners who did not respond to repeated requests, BIISC was able to gain the assistance of Hawaii County in utilizing a regulation that allowed the work to proceed. Section 20, Article 2 of the Hawaii County Code was established in 2013, allowing for the removal of hazardous trees on private property that poses a public safety hazard.

BIISC and Tree Works won the 'Good Neighbor of the Month' award for their work in the neighborhood

**Execution**

BIISC crews tramped through overgrown lots in the hot sun for days, pulling keiki albizia by hand or using the incision point application (IPA) or "hack and squirt" method with Milestone herbicide for more established young trees. More than 1,000 albizia trees were controlled this way. An additional 59 trees on 26 different parcels required careful trimming and felling by Tree Works. Starting at the top, using a 135-foot crane, arborists removed the trees, piece by piece, top to bottom. This intensely dangerous job required multiple positions with the crane and lift truck. In one case, BIISC simply used herbicide to control a massive tree that covered three lots, because there was no threat to any structures.

At one point in the project, the teams encountered a large stand of 175 tall albizia, which Krauss recalled took a week and a half to control - and ate 25% of the budget! Luckily, not all of the 175 trees needed to be completely brought down to stump height. To save money, the Tree Works crew implemented a partial trim, removing any dangerous branches overhanging infrastructure but leaving a bole 20 feet high (often with massive diameters of several feet). After Krauss' crew moved on, BIISC staff treated the stumps with herbicide.

Costs were further reduced by allowing the felled logs and limbs to remain on the property. The wood that was chipped stayed in the community, and local residents were given the opportunity to haul it off for use in agricultural and landscaping efforts.

A significant portion of Kahakai, on the end closest to the coast, was successfully treated through this project, but albizia remains along the rest of the length of the Boulevard, and completing that work remains a priority in the Hawaii County Albizia Mitigation Plan. More grant funds will need to be obtained to continue to implement all of the priorities in the Plan, and this is something that BIISC has pursued tirelessly since 2014. Local utility companies and neighborhood associations are trained in albizia treatment and are encouraged to treat young albizia along the roadways as they spring up, in the hopes that small efforts now will save millions in damage or control costs in the future.

For his part, Mike Krauss would happily work again with BIISC on albizia mitigation. He reports of BIISC manager Kaye, "She is a joy to work with, and her negotiations are always fair." BIISC felt the same about working with the contractor, and both Buckley and his successor, Dustin Swan, reported a smooth and efficient integrated operation. Krauss encourages other contractors to team up with conservation agencies and to be creative in finding low-cost solutions that can serve public safety.

For more information about the hybrid approach to albizia control, reach out to Tree Works or BIISC.

*Molly Murphy is the Plant Pono Coordinator*
*Franny Brewer, Communications Director*
*Big Island Invasive Species Committee, biisc@hawaii.edu*


Some of the trees were over 6 feet in diameter! After Tree Works cut the albizia, BIISC staff moved in to treat the stumps with herbicide.

# Tree trimmers and other contractors expand the work of the Coconut Rhinoceros Beetle Response team

*By Koki Atcheson*

Coconut rhinoceros beetle adult. Photo: Aarin Jacobs

Coconut rhinoceros beetle adults feed on the crowns of palms and damage exhibits as v-cuts once fronds mature. With enough feeding, CRB can kill host species including coconut, fan, date, and royal palms. Photographer: Kaili Kosaka

As coconut rhinoceros beetle (CRB) detections rise exponentially in hot zone areas on O'ahu, the Coconut Rhinoceros (CRB) Beetle Response has scaled up treatment and prevention strategies through green waste processing, removal, and tree trimming contracts. Data from 2021 showed a record-breaking increase in CRB trap detections in high-catch areas such as Pearl City Peninsula, Waipio Peninsula, Ewa Beach, Mililani and Kunia. If this trend continues, CRB will significantly damage host species like coconut, native loulu, fan palms, date and royal palms, and can eventually kill these trees. Increased trap detections and the tree damage that follows require urgent action at an appropriate scale. Now, as desired treatment areas expand, external contracts support the CRB Response by providing equipment, machinery, and staffing power that is not available internally.

Contracted professionals have supported CRB breeding site prevention by providing roll-off bins and hot composting for green waste material. CRB Researchers at the University of Hawai'i have developed treatment methods that are fatal to CRB at all life stages, but due to cost and volume limitations of these surefire treatment methods, they are reserved for highly infested material. At this point, the throughput of CRB treatment methods cannot address the quantity of material that requires treatment. To meet this need, the CRB Response has created contracts to preemptively treat or remove low-risk material with the support of industrial scale roll-off bins and hot composting facilities.

Field technicians from the CRB Response are able to prepare smaller palms for systemic treatment, but taller palms require contracted landscape professionals. Photographer: Koki Atcheson

Tree trimmers, too, have had an outsized role in the CRB Response's contracted work this year, as systemic palm treatments have shown promising reductions in nearby CRB trap detections. To complete systemic palm treatments, CRB field technicians drill a small hole at the base of a palm and insert an appropriate amount of chemical (imidacloprid or acephate) based on the size of the tree. The chemical is then incorporated into the vascular system of the palm, and CRB that feed on the crown of the tree do not survive. Imidacloprid exhibits low toxicity in mammals, and applying treatment to the trunk prevents the chemical from leaching into the soil. Still, it is necessary to trim fruits and inflorescences of palms prior to treatment to minimize risk to pollinators and prevent accidental ingestion of fruits.

As the CRB Response worked to replicate early results of palm treatments in new areas, it became clear that this treatment method worked best when applied to all palms at a landscape scale. To be effective, CRB researchers estimate at least that 70% of palms in the area should be treated, so even palms that are difficult to access or extremely tall must be trimmed. The more trees that can be treated, the more effective the treatment will be at reducing beetle populations. The CRB Response does not own boom lifts, hauling trucks or other required equipment for this type of job, and instead contracted this work to local tree trimming companies who trimmed palm fruits and inflorescences to prepare for treatment.

The ability to contract green waste removal and tree trimming work offers the CRB Response flexibility in treatment strategies. Just as CRB populations fluctuate and their distribution changes, so do the best available treatment methods. Rather than invest heavily in experimental treatment methods, the CRB Response has connected with local companies who are best equipped to complete certain aspects of treatment.

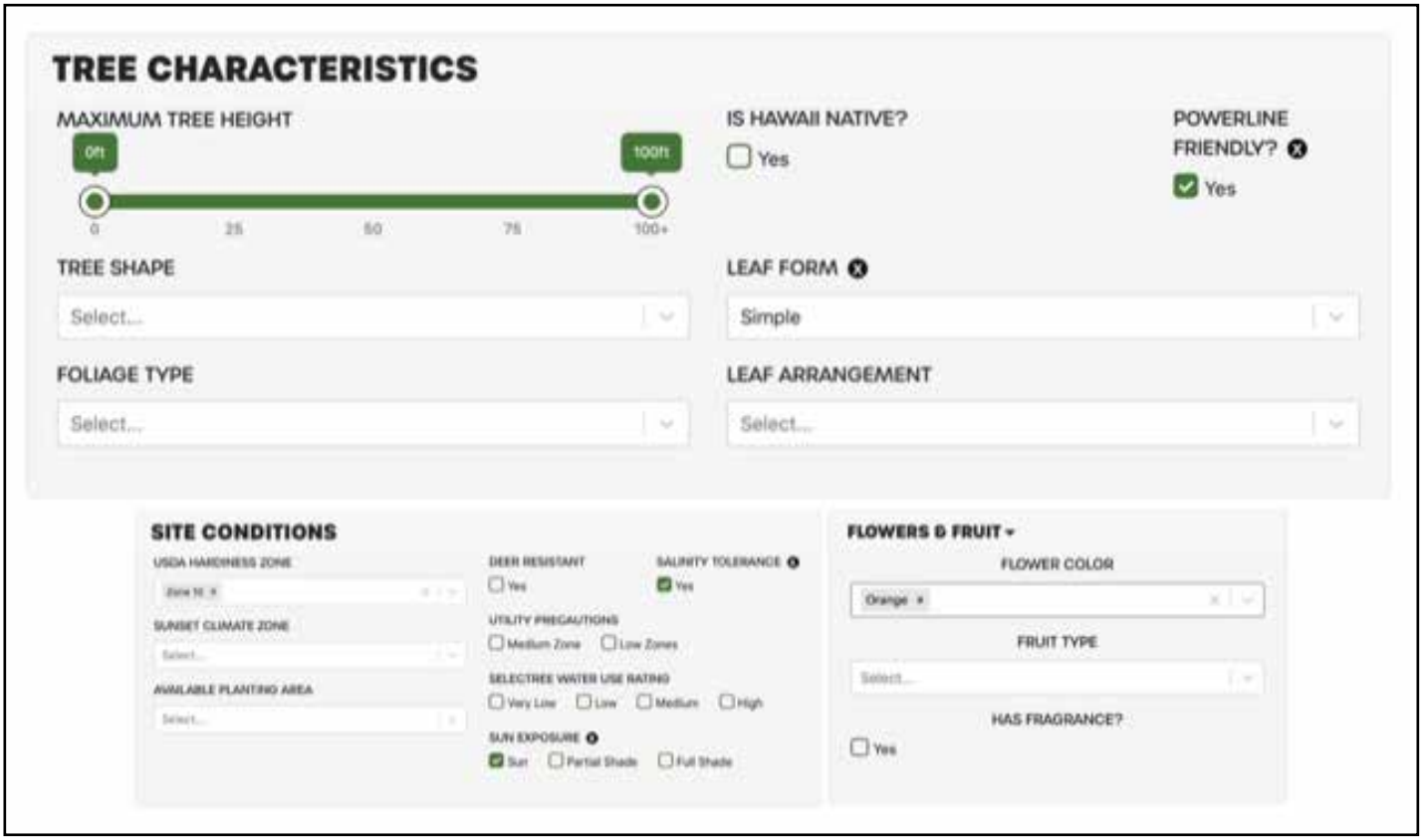
Arborists, tree trimmers, and other landscape industry professionals on Oʻahu are among the most likely groups of people to come in contact with CRB. In high-catch areas, tree trimmers have found CRB adults in the crowns of the trees feeding on the inner spear, and captured them for pickup by the CRB Response. Other landscape professionals, especially those who have been contracted by the CRB Response, have implemented green waste recommendations to minimize invasive species transport, such as cleaning vehicles thoroughly between job sites

and not stockpiling green waste. The CRB Response appreciates and relies on partnerships with landscape industry professionals, because the work to protect Hawaii's palms transcends organizational boundaries.

The Coconut Rhinoceros Beetle Response is a collaboration between the Hawai'i Department of Agriculture, United States Department of Agriculture, and the University of Hawai'i, among other partners. The CRB Response regularly posts updates at crbhawaii.org, on Instagram @ crbhawaii and on Facebook at facebook.com/crbhawaii. If you find CRB adults, larvae, or tree damage, capture any specimens, take a photo, and text it to 808-679-5244 or email crbhawaii.org. CRB Outreach can provide free presentations that may be eligible for ISA or RUP CEU credit if scheduled in advance.

*Koki Atcheson is an outreach specialist with the Coconut Rhinoceros Beetle (CRB) Response.*

A CRB Response field technician applies treatment to a coconut palm in a CRB-infested area.
Photographer: Kaili Kosaka




Available search criteria featured on SelecTree. These search criteria helps find the right tree for the right place.

# The Pacific Islands SelecTree and the Pacific Islands Online Tree Key

*By Kieran Althaus, Dr. Natalie Love, Dr. Jenn Yost, and Dr. Matt Ritter*

From the iconic `Ohi'a lehua (Metrosideros polymorpha) to the intriguing blue marble tree (Elaeocarpus angustifolius), the Hawaiian islands are home to hundreds of cultivated trees and shrubs. These species, both native and non-native, are culturally, economically, and ecologically significant. Given this rich flora, it is vital to provide a database where information regarding these species is easily accessible to those interested in learning more about them.

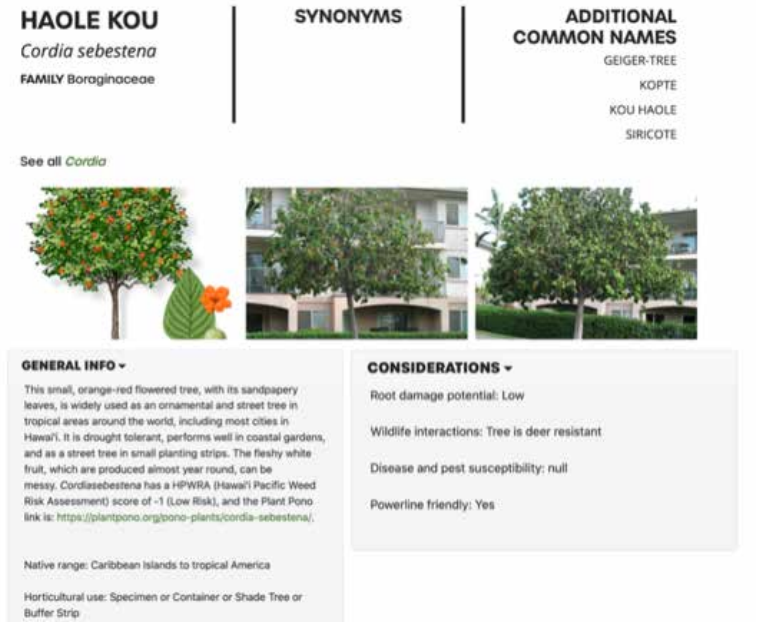
Pacific Island SelecTree is a resource developed by the Urban Forest Ecosystem Institute (UFEI) at Cal Poly to help users identify unknown trees and select species for planting. Pacific Islands SelecTree is a database of more than 200 commonly grown urban trees on the Hawaiian Islands. Each species featured on the website is associated with more than 75 characteristics that aid in planting selection, such as "Flower color," "Sun exposure," and "Flower fragrance." For example, a user could search for an orange flowered tree with simple leaves that does well under power lines, requires full sun and can tolerate being close to the sea. Entering this criteria into Pacific Island SelecTree, you would find that Haole Kou (Cordia sebestena) is the right tree given your parameters. Each species also has its own page with plant characteristics, planting considerations, and numerous photos to help users become more familiar with each species.

Another tool developed by UFEI is the Pacific Island Tree Key: a simple, easy-to-use tool that allows users to identify about 200 commonly cultivated trees and shrubs. Using readily observable plant characteristics such as leaf shape, leaf size and flower color, identifying trees is now much easier. The visually based key is designed to work well on mobile phones, allowing for species identification while in the field or on the go.

Unlike a traditional dichotomous key, the Pacific Island Tree Key sometimes contains three choices on one page, creating a shorter and faster keying experience.

Cal Poly's UFEI team plans to regularly update and maintain the Pacific Islands SelecTree database by adding new selection criteria and tree characters, updating species names, and including new species. With these tools, urban foresters, arborists and tree enthusiasts alike can become more familiar with Hawaii's diverse flora. The Pacific Island Tree work by the UFEI team at Cal Poly is made possible with support from the US Forest Service, Hawaii's Department of Land and Natural Resources, and Hawaii's Division of Forestry and Wildlife.


A Pacific Island Tree Key page as seen on a smartphone. Unlike a traditional dichotomous key, the Pacific Island Tree Key sometimes contains three choices on one page, creating a shorter and faster keying experience.




The haole kou species page with all the information about the species.

(Top) Frank Myers, the visionary who contacted his competitors about furthering the status of arboriculture as a respected profession and became the first president of Aloha Arborist Association. Photo courtesy of Trees of Hawaii.

(Bottom) Fred Flores, the first utility arborist in the State of Hawaii. Photo courtesy of Trees of Hawaii.

# HAPPY 45TH ANNIVERSARY, AAA!

*By Carol Kwan and Steve Nimz*

According to The Outdoor Circle's archival documents, it hired Mr. Olivera to be the first tree trimmer in Hawaii a hundred years ago in 1916. While he was the lonely only back then, by 1976, the tree care industry had a lot more workers and contractors. Climbing was done on manila ropes and chippers and aerial lifts were rare. The industry was full of 'real men' who used brute strength and brains to tackle the hairiest tree care challenges of the day.

"There was 'The Mad Russian', Petrovich of Petrovich Tree Service, Fereti (a.k.a. Freddy) Toilolo of American Tree Service, Ed Alatini of Alatini Landscape, and Malcolm Smith of Smith Tree Service," recalls Steve Nimz. "Also Neff Maawa – he was a famous wrestler- of Maawa Tree Service. His slogan was 'We'll wrestle your tree problem.' Trees of Hawaii was already around, with Frank Myers and Fred Flores. Fred was the first utility arborist in the State of Hawaii. There was Warren Vignoto of Diamond Head Tree Expert Company. That's the company that I took over and I changed the name to The Tree People. There was also Pierce B. Tree Service. Pierce B. Rillamas was a Filipino African American, an incredible man. He could climb and prune 100 coconut palms a day without breaking a sweat. There was Wilbur Dorothy of Sandwich Isles Tree Service (the company has since changed hands) and Sherwood Goo of Sherwood Tree Service too."

AAA members with Governor John Waihee in 1990, being recognized for Hawaii's First Christmas tree recycling program. Photo courtesy AAA archives.

"These guys did incredible work with muscle power. Their typical equipment was flat beds, dump trucks, chain saws, and machetes. Loading was all done by hand," continued Steve.

In January 1976, Frank Myers (Trees of Hawaii) sent out an invitation to leaders of other interested tree care companies to attend a 'general arborist "rap" meeting' to address a concern that the reputation of the industry was being damaged greatly and to 'further the status of arboriculture as a respected profession.' Out of that meeting, which was attended by "youngster" Steve Nimz, among many others, came Aloha Arborist Association (AAA), established in March 1976. Frank Myers (Trees of Hawaii) was president of the new organization, while Fereti Toilolo (American Tree) and Malcolm Smith (Smith Tree Expert) were vice presidents and Steve Nimz (The Tree People) was secretary-treasurer. The first official meeting of the group was held on May 20, 1976, at the Wisteria Restaurant with agenda issues including workmen's compensation insurance, safety, licensing, and noise regulation.

The new group was politically active, sending letters to congressmen protesting the proposed increase in the minimum wage from $2.30/hour to $2.65/hour. AAA's archives include response letters signed by Senator Spark Mitsunaga and then Representative Daniel Akaka.

It wasn't all serious topics and politics, though. By the late 1970s, AAA was holding annual jamborees. These were fun competitions including tree climbing, cross-cut sawing, barefoot coconut climbing, log swinging contests, and races for picking up logs and putting them in wheelbarrows. Any worker in the tree care industry could compete, ground crewmen as well as climbers. Doug Fox from the Big Island was the overall jamboree champion three or four times per Steve.

Times have changed. The minimum wage is now $10.10/hour in Hawaii and likely to climb, safety regulations are much tighter, and there are far more licensed tree care companies in the state. While there are plenty of 'real men' who work in Hawaii's tree care industry, there's plenty of work for 'real women' like Desireé Page, the first and current woman president of AAA, as well. Still, some things never change. We're still fighting noise regulations that negatively impact our industry and unlicensed contractors unfairly compete with those who play by the rules. And 45 years later, AAA is still hard at work, educating the industry and the public about proper tree care.

*Carol Kwan is the President of Carol Kwan Consulting, a Certified Arborist, Treasurer of Aloha Arborist Association, and a Past President of Western Chapter International Society of Arboriculture.*

*Steve Nimz is Owner of Tree Solutions & Environmental Consulting Services Inc. and Director Emeritus of Landscape Industry Council of Hawaii.*

# PEST COLUMN

BY: ALLISON WRIGHT

# Plumeria Stem Borer

The plumeria stem borer, *Lagocheirus undatus*, is by no means a new pest in Hawaii, but in the last few years it has been more prevalent in Maui landscapes. The plumeria stem borer is a longhorn beetle, which lives most of its lifecycle inside host plants. It is most commonly found on all varieties of plumeria, other members of the Apocynaceae family, and in many other plants not in the plumeria family including, but not limited to hibiscus, cacao, and jatropha. These borers can be devastating in the floriculture industry by damaging plumeria lei crops. In landscapes it causes damage to some of Hawaii's most iconic landscape trees.

The first signs of an infestation include black, oozing sap adjacent to small holes as well as drooping or shriveled stems. As the larvae feeds and grows, it hollows out the stem of the plant, leaving behind sawdust-like material filling the space. These young borers can grow to the same size as the stems, effectively killing the stem in which it resides. The stem with the feeding borer in plumeria can droop or break off as it loses its integrity.

Visual symptoms on a plumeria tree

Plants with more dense wood will show symptoms of dying branch tips first. Heavy infestations will kill the plant as the entire internal part of the tree is eaten. Once the beetle has matured, it eats its way out of the stem, leaving behind a large hole, and moves on to breed and eat the next plant. Monitor for secondary infestations of other types of borers, which are attracted to the weakened plants. Fungal diseases may also emerge as the plant's health deteriorates.

Treating for the plumeria stem borer is truly a matter of using steps from integrated pest management. Assess your tolerance for this pest, including how it may affect your property and those nearby. Chemical control is essentially ineffective as the insect resides inside the plant. Systemic controls stay within the vascular tissue and foliage of plants and are therefore mostly unsuccessful on this insect. Once you see symptoms of the borer, remove affected branches, and look for the larvae within for proper identification. Prune affected branches and continue to monitor for new damage. The best control for plumeria stem borers is to keep your plants healthy by implementing proper cultural techniques.

*Allison Wright is the Superintendent for Island Plant Company, LLC and the Co-Owner of Valhalla Flower Farm*


Larval stage of plumeria stem borer


Size comparison of the borer to the limb of the plumeria tree from which it was removed.


Mature plumeria stem borer

# LANDSCAPE INDUSTRY COUNCIL OF HAWAII

Renew your membership online at **www.hawaiiscape.com**

The LICH Board of Directors invites you to be a part of our dynamic state association, Help us expand our programs by becoming a member today. You will be eligible to receive member discounts on our classes, workshops, and Annual Conference and Tradeshow. Corporate Member logos will be displayed on our web site.

When you become a LICH Member you make a contribution to the continued growth of our statewide association.

- Memberships for individuals are **$40 per calendar year**.
- Company Memberships are **$250 per calendar** and include unlimited paid staff.

To become a 2021 Member, we encourage you to join online at: **www.hawaiiscape.com**. You will immediately receive an Invoice and a Welcome Notice that you have become a member. This will help as proof of membership when signing up for HMMA Insurance. It will also help LICH build an Industry Survey which has not been done since 1986.

LICH
Landscape Industry Council of Hawai'i

# RIDGE to REEF
## ENVIRONMENTAL

## Sustainable Gardening Solutions

### EXCLUSIVE DEALER

MicroLife™

**All Organic Biological Fertilizers**

We are committed to healing the world and providing a bright future. We believe that healthy soils, plants, planet, and people are all connected. All of our products have the highest nutritional value possible so that all soils, plants, and people benefit.

### SALES & SERVICE

EGO™

**The #1 Rated Battery Powered Lawn Equipment Platform**

Every EGO POWER+ product features our industry-leading ARC Lithium™ battery technology, which delivers relentless power, superior performance, and longer run times. And any EGO battery works with every EGO tool.

RIDGE to REEF ENVIRONMENTAL

1866 Wili Pa Loop, Wailuku, HI 96793
Contact us 808-856-0423 R2Renvironmental@gmail.com
www.ridgetoreefenvironmental.com

# COMMITTED TO SERVING HAWAII

Serving all islands, and proud to be Hawaii's largest stocking distributor for:

- AGRICULTURE
- GOLF
- IRRIGATION
- WATERWORKS

NETAFIM™ GROW MORE WITH LESS · Hunter® · RAIN BIRD · Weathermatic™ Water Conserving Innovation · Buckner SUPERIOR · TORO®

PACIFICPIPE

**O'ahu - Pearl City: 808.455.8700** 1255 Kuala St. Pearl City, HI 96782
**O'ahu - Kalihi: 808.847.8700** 1726 Hart St. Honolulu, HI 96819
**Maui: 808.877.5800** 82 Pulehu Pl. #101 Kahului, HI 96732
**Big Island: 808.747.8100** 74-4701 Kamanu St. Kailua-Kona, HI 96740