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Formed in June 1986, the Landscape Industry Council of Hawai'i is a state wide alliance representing Hawai'i'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.

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THE VOICE OF HAWAII'S GREEN INDUSTRY

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PRESIDENT'S LETTER

BY KATY DESHOTELS-MOORE



HAU'OULI MAKAHIKI HOU LICH,

First off, I want to say Mahalo for allowing me to sit on your Board and work with the leaders of our industry that continue to dedicate their time and energy to serving LICH. It is with humility and gratitude that I accept the duties of the president and promise to serve you to the best of my abilities.

As I write my first "President's Letter" for the LICH magazine, I am reminded of how this industry has helped advance my career and shape the person I am today. I look back on the early days of MALP (Maui Association of Landscape Professionals) and feel so grateful to have been part of this organization's Board from its inception. MALP provided the platform which allowed me to learn landscape best practices and ultimately grow within the industry. After MALP came HILA (Hawaii Island Landscape Association), in which I participated for several years with many of our current leaders in the industry that you are familiar with. I imagine they would share similar messages about how their careers have been shaped by LICH and our local trade organizations.

My message today is to invite you to explore the educational growth opportunities LICH and your local trade organizations offer the landscape industry; however these organizations wouldn't exist without your help and participation. If you've not already joined LICH, I invite you to visit our website to see what we have to offer; then attend a meeting or workshop and see for yourself if the platform is right for you. I look forward to meeting and welcoming you to the organization. I hope to see you soon! AHUI HOU!

Katy Deshotels-Moore, LICH President

EDITORS NOTE:

The Bis"mark" was missed in the January/February 2022 issue. The Bismarck palm article titled "The Bismarck Palm: From seeds to specimen plant harvest" has three images photos on page 12-13. The captions are out of order and should be switched for these three photos. Thank you to Dr. Richard Criley for catching this mistake.

Correction:

"Singular Bismarckia nobilis, bright silvery blue leaves provide accent in both day and nightscape settings." caption should reference the cover photo. (top)

"4-6 year old Bismarck palm seedlings planted with a between row space of 15 feet and in-row space of 11 feet. This staggered planting allows for pre-harvest conditioning needed to improve survival during extraction, off-site transport and replanting at final landscape location." references the second photo.

"Newly germinated seed of Bismarck palm was planted in an 8-10 inch grow tube with bottom holes covered with shade cloth and coarse volcanic cinders. When the root tips (technically the "cotyledonary petiole") reaches the cinder, a leaf is produced at the surface of growth medium." should reference the third photo.





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 2022 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.



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The new **Find a Landscape Certified Professional** on the LICH website has a list of companies having Certified Arborists in Hawaii, provided by the International Society of Arboriculture. If you don't see your Company, let the Executive Director, Garrett Webb know by sending your information to: palmsinkona@yahoo.com.

If your company is listed, but you want additional information, also let Garrett know. Company information can include; postal address and location, email address, and website. Names of Certified Arborists are **NOT** included.

UgMO Technologies - Reducing our irrigation footprint one zone at a time

by: Mark McCarel, Derek Pruyne, and Jesse Blais

For centuries, our most important natural resource has been overlooked and taken for granted. Now with the rapid change in rainfall amounts and predictions, water management systems focused on conservation are the future of how we will plant, grow, and live within our environment. Luckily, irrigation technology has come a long way. The next level of irrigation efficiency lies within the ground: a sensor delivering continuous soil conditions at the root zone, communicating directly with the irrigation controller.

UgMO's patented soil sensor measures soil moisture, temperature, and salinity approximately every 10 minutes and transmits data back to the UG1000 controller. Unlike many other soil sensors on the market, the UgMO sensor is completely buried and wireless. This allows for a non-disruptive installation with no hardware above ground detracting from the landscape aesthetic. The wireless nature of the sensor also allows the user to bury in more desirable/critical locations within the rootzone.

Using direct soil measurements relayed

from the sensor to the irrigation controller (UG1000), a patented algorithm calculates irrigation runtimes necessary to restore soil moisture to ideal, targeted conditions. This is performed on a zone-by-zone basis as each irrigation zone has a unique sensor and its own set of operational parameters based on environmental conditions and zone attributes. Because the UgMO system always knows the volumetric water content (VWC) of the soil, it learns precisely how much water is lost from the profile and how much water to apply to keep the rootzone within an optimum threshold. The result is a healthier landscape and exceptional water savings.



Irrigation Controller (UG1000)

In recent years, the irrigation industry has responded to environmental pressures by pivoting from conventional "time based" control (prescribed runtimes and schedules) to smart irrigation controllers most often referred to as "weather-based" or "ET" (evapotranspiration) systems. While these controllers are superior to the conventional units, they require many inputs in order to estimate the amount of water lost from the rootzone. A few examples of these inputs include temperature, sun exposure, slope, wind, precipitation, plant material, soil type, hardware, etc. When any of these inputs are measured or used inaccurately, the resulting error can quickly lead to substantial over or under-watering. UgMO's sensor-based system takes the guesswork out of this process through direct soil measurements. Additionally, because one or more sensors are buried in each zone, a high degree of granularity is achieved accounting for differences in microclimates throughout a given location.

A primary feature of the UgMO Solution is to optimize irrigation output and plant health. However, the data stream provided by the robust sensor network does not end

Wireless Soil Sensor





Web based application that makes sense of sensor data and can chart soil moisture, salinity, and temperature levels.

at the controller. Each UG1000 is outfitted with a cell modem which uploads all data to the UgMO Knows web application. This allows users to view soil data in real time, monitor and track trends, alert based on defined conditions or parameters, generate reports related to irrigation events over time, and much more. The platform can also be used to remotely access the irrigation controllers in order to run stations manually or make configuration adjustments from any internet-capable device.

The UgMO Solution has been saving Kamehameha Schools Maui Campus 30% year over year since October of 2018. Irrigating on Maui and throughout the state of Hawaii is different than most places in the country given the numerous microclimates that exist. This makes it extremely difficult to predict weather patterns and anticipated rainfall amounts in a given location.

Measuring the soil continuously at the root zone for moisture, salinity, and temperature give unparalleled results in irrigation system performance and changing soil conditions. Pukalani, Maui is typically a dry area on the leeward side of Haleakala, though it can catch windward showers at

times, typically precipitating in varying amounts around the campus. By measuring the soil zone by zone, the applicator can irrigate each zone's individual needs on a nightly basis rather than making generalized predictions and adjustments.

One additional benefit in using soil sensors in Hawaii to monitor salinity levels for properties on well water that is becoming increasingly brackish. This is a real concern as salt build up in the soil can lead to many agronomic problems. Salts can lock up soil nutrients and inhibit the plant material

from properly absorbing water. It will be imperative to have the ability to monitor this situation and proactively manage the buildup of salts in the soil before it negatively affects the landscape. The UgMO system can help because it will measure and report on the amount of dissolved salts in each zone. Salts adhere to the soil in root zones differently based on soil type and structure. Knowing what the salinity levels are across the property will help managers determine when these levels are getting to a point where they may be detrimental to





Hāpu'u (*Cibotium menziesii*) or Hawaiian Tree Fern

the health of the landscape. At that point, cultural practices can be used in an attempt to flush the salts. The UgMO system can also be used in the flushing process as verification of which practices work best and if the goal is being achieved.

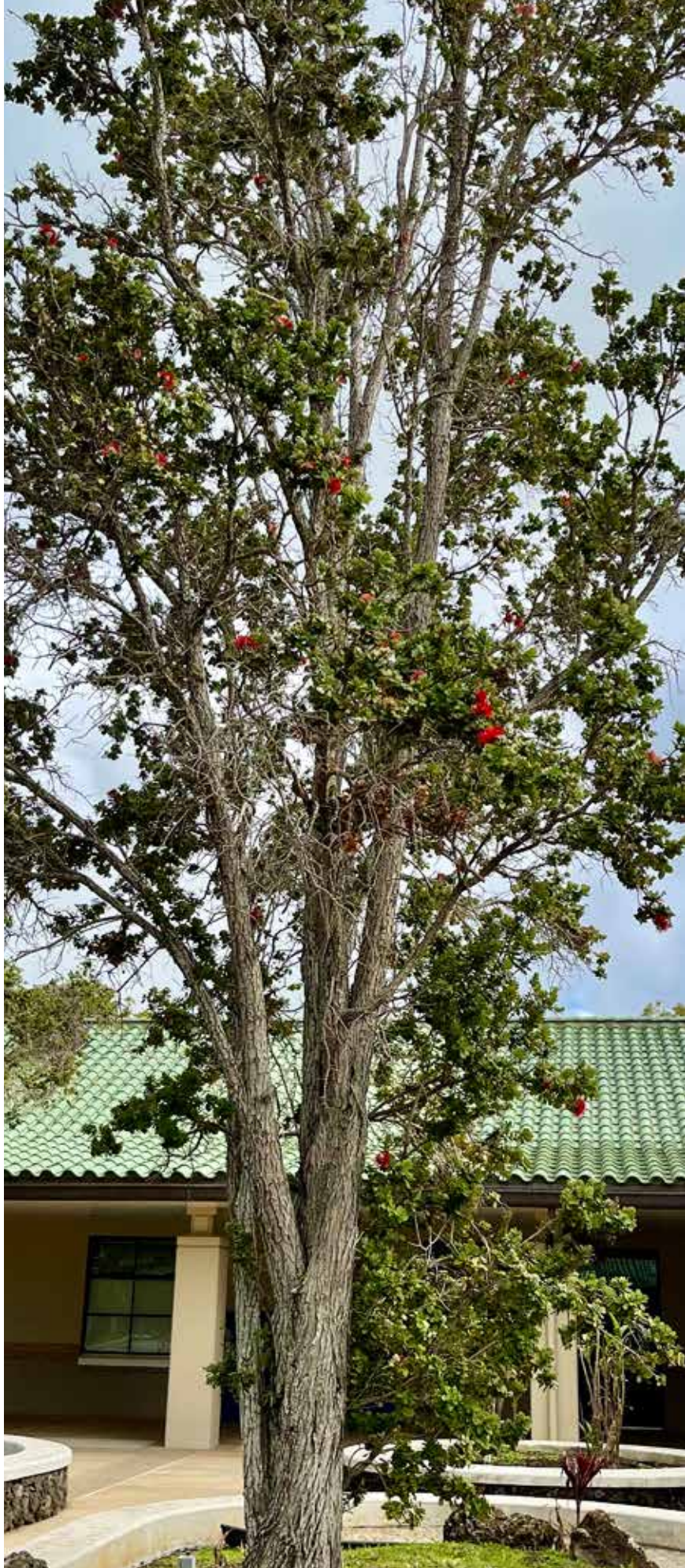
There is no replacement for the human element in landscaping and irrigation. Personal knowledge and experience of one's own property cannot be replaced. Observing what is happening in the soil throughout each area of irrigated land can improve efficiencies, alert when parameters are broken, and help the grounds team to proactively care for the water usage and landscaping plants through data driven results. We are blessed to have so many microclimates and such beautiful landscapes in Hawaii, but it's on all of us to protect our most important natural resource that creates life.

.....
Mark McCarel, Chief Operations Officer of UgMO Technologies Mark has nearly two decades of turf management experience and is dedicated to solution implementation and outcomes. Derek Pruyne, Lead Agronomist of UgMO Technologies

Derek Pruyne joined the UgMO team as a Data Analyst with field and greenhouse research, and three years as a Sr. Research Specialist in turfgrass biotechnology.

Jesse Blais, Field Operations Manager of UgMO Technologies in Hawaii. Jesse has over 10 years of landscaping and irrigation experience and lives in Kula on Maui.

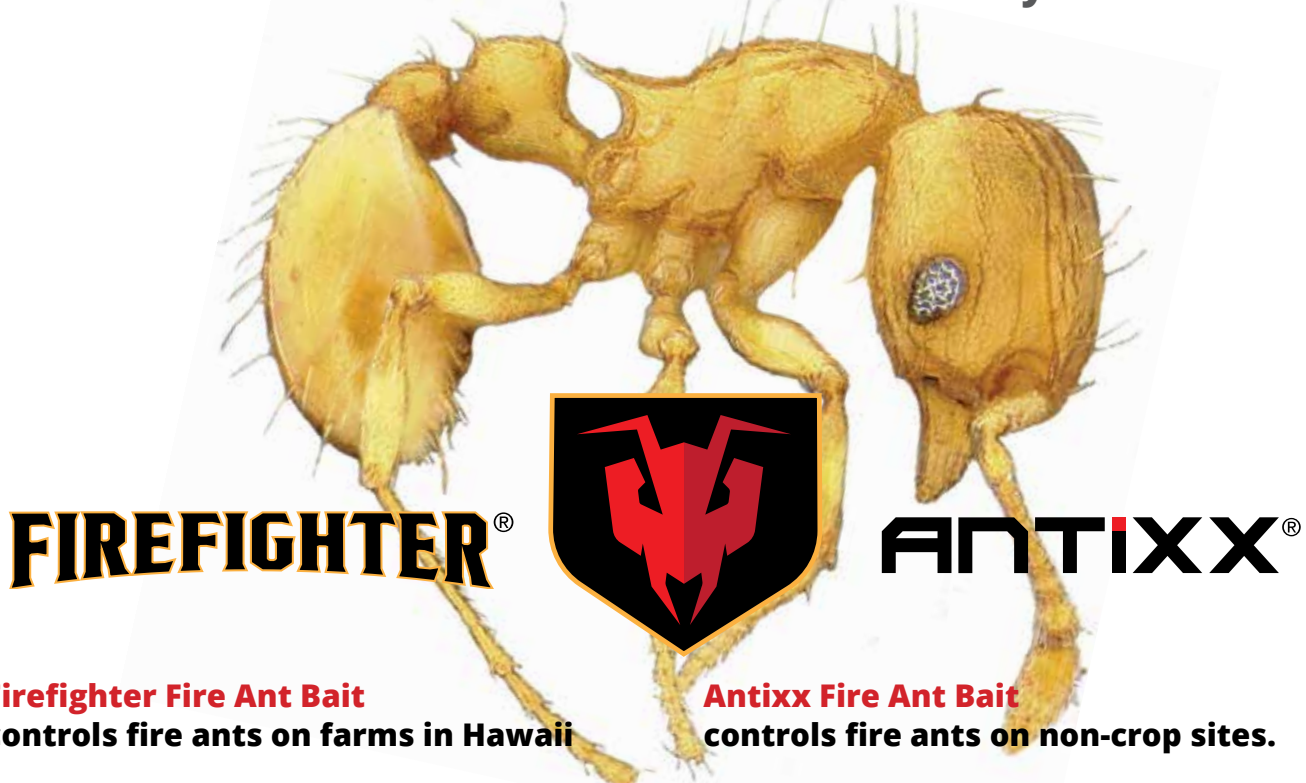
'Ohi'a lehua (*Metrosideros polymorpha*)



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Help Hawaii stomp out the fire today. Mahalo



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JAMES TAVARES: THE GRASSMASTER

Interview by: Hannah Lutgen

I recently had the pleasure of interviewing James Tavares, owner and expert sod grower in Maui, Hawaii. Without further ado, let's meet James and learn about turfgrass maintenance!



Top: El Toro Zoysiagrass. Bottom: Seashore Paspalum

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

I was born and raised on Maui. I attended St. Anthony School. I received a Bachelor of Science degree in General Agriculture in 1979 and a Master of Science degree in Horticulture Science from University of Hawai'i at Mānoa (UH Manoa) in 1983. I am married with 3 children and 1 granddaughter.

Q. What inspired you to start your own business growing turfgrass?

I was the teaching assistant for Dr. Charles Murdoch as an undergrad at UH Manoa. He got me interested so I became his research assistant and did my masters degree in Horticulture Science specializing in Turfgrass under him. At the time, I was interested in becoming a golf course superintendent.

Q. How long have you been growing turfgrass?

After graduation in 1983, I returned to Maui with 5 ziploc bags of different types of grass stolons and began planting trays. At that time, I was working for the NifTAL (Nitrogen Fixation by Tropical Agricultural Legumes) project and 2 years later became an Extension Agent with University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources (CTAHR). After 13 years working as an Extension Agent, I made the decision to start my own business. I applied for a lot in the Kula Ag Park and got it in 1987. My business name is The Grassmaster.

Q. What did you enjoy about being an extension agent?

Being on the frontlines, walking the grounds with landscapers and finding new pests and diseases such as hibiscus erineum mite and bougainvillea looper and publishing papers to help growers.

Q. What are your top 3 favorite varieties of turfgrass?

I like El Toro zoysia the best- it has few insect and disease problems, grows very tight so it chokes weeds, uses less water and fertilizer than other grasses, and has some shade tolerance. Overall El Toro zoysia is a lower maintenance turfgrass that looks good. I think seashore paspalum is the most beautiful grass and feels the softest but requires high levels of maintenance to achieve the perfect look. However, seashore is sometimes called the environmental turfgrass because it tolerates brackish and effluent water making it useful in areas where water quality is poor.



St. Augustinegrass stolons spreading



St. Augustinegrass



Centipede grass



Z3 Zoysiagrass



Emerald Zoysiagrass

Q. What is the best turfgrass for shady areas and how many hours of direct sunlight does turfgrass need to grow?

I think St. Augustinegrass is the most shade tolerant but still has its limits. My rule of thumb is a minimum of 4 hours direct sunlight but can grow well under trees if the canopy is thinned and raised high enough. These shady conditions will require a higher mowing height and less foot or dog traffic in order to keep it looking good. This grass has few if any rhizomes so if it dies back, it has to grow in from the sides.

Q. What types of turfgrass do you sell?

Since I started over 30 years ago, I have older varieties that I think all perform well. Adelaide seashore paspalum; El Toro, Emerald, and Z3 Zoysiagrass; St. Augustinegrass and trying a little centipedegrass.

Q. What advice are you willing to share regarding proper planning, fertilization and turfgrass maintenance?

For planting, proper soil prep is important. How well the root zone is amended will make a big difference in the overall health of the grass. A soil test will tell you what you need to add. Try to use slow release fertilizers in the maintenance phase and apply on the lean side otherwise growth is too vigorous and you risk excess nitrogen running off into our storm drains and the ocean. Keep mower blades sharp. Reels cut lower and give a cleaner cut than rotarys but are more expensive.

Q. Is it important to adjust mower height and/or irrigation duration



and frequency throughout the year?

Each grass has a preferred mowing height. Cutting too low can kill the grass, especially St. Augustine and weeds can infiltrate. If cut too high, water penetration is more difficult and diseases and insects could become problems.

I see more problems with homeowners not adjusting watering schedules from summer to winter and then back to summer. There are differences due to where you live like elevation, leeward vs windward, sandy vs clay soil, but in general, grass will need more water in the summer and less in winter.

Q. What are the most common pests and diseases affecting turfgrass?

Every summer, armyworms and grass webworms become a problem here on Maui mostly on seashore paspalum and the bermudagrass hybrids. The Southern Chinchbug is another insect pest that seems to only affect St. Augustinegrass in the hotter and drier areas. It will kill the grass if left untreated unlike the caterpillars who only eat the above ground parts of the grass allowing the rhizomes to regenerate. The most prevalent disease is Dollar

Spot caused by a fungus on seashore paspalum although golf courses encounter others on their greens.

Q. Do you have any tips for disease and pest prevention?

Watering early in the morning will allow the grass time to dry during the day so it's not too wet going into the night. Free moisture on the leaf at night gives fungus the conditions it needs to grow and spread. Mow disease infected areas last to reduce spread of the organism and wash mowers before moving to another area. Watch for caterpillars in the hotter months. Mynah birds feeding in the lawn are good indicators of a problem. Lay 12" square pieces of plywood out on the grass in the evening and turn over the next morning to see if caterpillars are present. Treat if needed or let the birds take care of it.

Q. It is a pleasure talking with you James, your passion as a grower truly shines! What do you love most about your job?

Being a farmer has some major challenges but working outdoors and being my own boss is what makes it all worthwhile.

Thanks for your time, James!

KALANIHO‘OKAHĀ COMMUNITY LEARNING CENTER – NĀNĀKULI

by: Dana Anne Yee, FASLA, LEED AP, ISA CA, RA, UH MG



At the base of Pu'u Heleakala and the Wai'anae mountains, is the welcoming, open, and barrier free, Kalaniho'okahā Community Learning Center. Through preserving, respecting, and emphasizing the country character of Nānākuli, the landscape honors the Hawaiian culture and their traditions. Photo credit: Dana Anne Yee, FASLA.

Project Team:

Kalaniho'okahā Community Learning Center - Nānākuli

Landscape Architect:

Dana Anne Yee, FASLA, LEED AP, ISA CA, RA, UH MG

Dana Anne Yee, Landscape Architect, LLC

Client: Kamehameha Schools

Contractor: Kiewit Building Group, Inc.

Architect: NAC Architecture

Civil Engineer: Mitsunaga and Associates, Inc.

Landscape Contractor:

Island Landscaping & Maintenance, Inc.

Native Hawaiian Consultant:

Glen Kila

The American Society of Landscape Architects, ASLA Hawai'i honored Dana Anne Yee, Landscape Architect, LLC with an Honor Award in the General Design Category for the Kalaniho'okahā Community Learning Center - Nānākuli. The Virtual Design Awards Gala took place on October 29, 2021.

The following is the entry, with additional information, for the Kalaniho'okahā Community Learning Center. Mahalo to ASLA Hawai'i, the ASLA Board of Directors, and the Jury for this ASLA Hawai'i award. It is with great pride that we share this honor with Kamehameha Schools, the staff and students of the Kalaniho'okahā Community Learning Center, and the entire Nānākuli Community.

Project Narrative:

Nānākuli is now home to the Kalaniho'okahā Community Learning Center. In designing the Center, the landscape architect created garden landscapes honoring the culture, traditions, and people of Nānākuli. From a barren unkempt land, arose gardens of wonder and possibilities, with a welcoming landscape open to the community, no visual barriers, and a linear landscape, that echoes Pu'u Haleakala and the Wai'anae mountains.





The 350 l.f., 9,500 s.f. Bioswale is filled with 100% native Hawaiian plants. Photo credit: Dana Anne Yee, FASLA.

The stage is set for the creative energy of the community's 16 to 24-year-old at-risk students to learn 'āina based programs for life-long learning opportunities and as a gathering place for all of Nānākuli. According to legend, the dry and barren land of Nānākuli made it difficult to offer food to passing travelers. Instead of appearing inhospitable, residents would pretend to be deaf. No more! Through the landscape of the Center, Nānākuli no longer pretends to be deaf. Rather, it listens to the Wai'anae Coast Community as a welcoming, safe, and hands-on learning environment, while maintaining the country feeling of Nānākuli. The community center landscape was designed with a planting palate of native Hawaiian plants, plants used in the Hawaiian culture, and plants found in their own backyards. The landscape was designed to encourage learning about native Hawaiian plants, edible, medicinal, and ethnobotanical plants in the traditions of old Hawai'i. Wide, curving, comfortable pathways lead to a 9,500 s.f. bioswale filled with 100% native Hawaiian plants, a Hawaiian

Heritage Cultural Garden, edible gardens, and preserve areas planned for agriculture fields for sustainable food, wide open views to watch the grass stage performances from the lanai, open grass fields for play, and to maintain clear open views of the entire center for safety.

The Hawaiian Heritage Cultural Garden was planted with many lei plants of Crown Flower, Puakenikeni, and 'Ilima, strategically located near the open-air pavilion, under the majestic Kiawe Trees which were tagged and saved to remain by the landscape architect. The pavilion is located with views of the mountains and fragrances of Plumeria and Puakenikeni fill the air. Students can learn from their own gardens and from Kūpuna, the practices of lei, lauhala mats, pāpale (hats), and fish net making.

Kamehameha Schools generously gifted this three-acre learning center to the Nānākuli Wai'anae Coast Community. Kamehameha Schools is a private charitable educational trust. Princes

Bernice Pauahi Bishop left 375,000 acres of land and gifted "the rest, residue, and remainder of my estate" to educate her people. The Wai'anae Coast Region is home to the third largest concentration of Native Hawaiians in the state, with a population of 28,000, including 10,000 in Nānākuli alone.

This first design-built project for Kamehameha Schools started in 2018, with a contest, a contractor, and a great team of designers that understood the needs and guided the project to completion. With the design-built concept, the landscape was limited in budget, making it a challenge to overcome, convince, and change.

The learning center is named after Dr. Agnes Kalaniho'okahā Cope. The team was guided by Aunty Aggie's spirit and passion. The landscape architect was inspired to create the gardens in her honor.

Welcome! Swaying Coconut Palms seem to beckon you from afar to visit to share in the activities. What better way to present the project than by having the entire span of 350 linear foot entrance of native Hawaiian plants!



Starting out in Life. The landscape of the center is a place for future opportunities. Spaces were created, and sometimes left open to let the community users decide what and how they would like their landscape to grow. The preservation area is planned for future agricultural fields for Agroforestry, to grow and harvest vegetables, fruits, and medicinal plants.

Early on, the landscape architect spent time working with the future community center's leaders as to what plants they would like to see in their gardens. The Tamarind Trees arose from these discussions.

Native Hawaiian Plants. The Wai'anae Coast holds some of the most endemic and unique native Hawaiian plants.

100% of the plants in the 350 l.f., 9,500 s.f. bioswale are native Hawaiian plants. Most of these natives are drought tolerant to accommodate the harsh and dry Nānākuli climate. Ma'ō native cotton, 'Uki'uki for dye, 'Ohai, Pohuehue, and 'Ewa Hina Hina grow well. Native Hawaiian Naio, Kulu'i, 'Uki'uki, Carex,

Pepperomia, Beach Morning Glory, Bacopa, 'Akulikuli, and 'Ilima thrive.

Hawaiian Native and Culturally Significant Plants

Coconut Palms – Niu. Working closely with Glen Kila, the Hawaiian cultural consultant, who shared that Niu were very important during the migration of the Hawaiian people to the Wai'anae Coast. He told of the Wai'anae Niu Grove that was celebrated at Pokai Bay in song, 'Ulu Niu O Pokai. Honoring this significance, Coconut Palms were meaningfully planted throughout the landscape.

'Ulu Trees The Breadfruit Trees provide shade and fruit in the landscape to honor Auntie Aggie.

Hala Trees Pandanus were planted as a prominent resource for educational activities. Hawaiian traditions of making lauhala mats, pāpale, and lei can be taught by Kūpuna under the open air pavilion.

Native 'A'ali'ii were planted at 18" o.c. fulfilling the parking requirement,

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Clear views of Pu'u Heleakala and Wai'anae mountains were maintained and honored. Photo credit: Dana Anne Yee, FASLA.



Coconut Palms (Niu) were important palms during the migration of the Hawaiian people to the Wai'anae Coast. Photo credit: Bryson Miller and Dana Anne Yee, FASLA.

but more importantly the 'A'ali'i served as a symbol for strength. 'A'ali'i can withstand the wind and are a symbol of the people that stand strong.

Native Milo Trees were used to help shade the parking lot and met parking requirements.

Edible Native Plant Material. Edible plants such as Taro, Noni, 'Uala, and 'Ulu were planted for educational purposes and food.

Sustainability and Education. When tasked with retaining the sites' water, the landscape architect saw this as a positive opportunity for a vast variety of native Hawaiian plants in the Bioswale. The theory of Natural Selection was explained to Kamehameha Schools. The landscape architect designed the bioswale and hand placed all the many varieties of thousands of native Hawaiian plants within this dry coastal environment. The strongest plants would survive! The usual suspects, native Hawaiian 'Ilima papa, 'Akia, Naupaka, and Carax grew prolifically. Surprisingly, Bacopa spread like a

carpet on the bottom of the bioswale.

Bioswale. A difficult challenge was the requirement to retain the water on the site. This was solved in the most beneficial way. Through Bioretention methods, the site runoff from the parking lot and paved surfaces filtering through the Bioswale, helped to water the native plants and filter out pollutants.

Grassed Swales. Grassed swales were located throughout the landscaped project for runoff water. These grassed swales provided pervious surfaces and therefore reduced the total runoff volume.

Ecological. The plants were specifically selected to create habitats for our native Blackburn's Butterflies and other insects, and birds. Crown Flowers are attracting butterflies and other flowers encourage Honey Bee pollination.

Water Conservation Methods and Irrigation. Good environmental practices were implemented. The Biodiversity of native, drought-tolerant species, such as native 'Akia, were planted to minimize

irrigation requirements and to promote water conservation. The irrigation design included rain and flow sensors to help to conserve water. A submeter system has been installed at the back-flow preventor to save costs.

Reclamation. Reclaimed coral rock boulders were selected, tagged, and saved from the previous site by the landscape architect. The coral rocks were carefully placed around the site for additional natural seating. They also were used as headers to separate the grass from the preservation areas.

Seating. Comfortable benches were placed throughout the landscape. Grass mounds served as additional seating and large natural coral blocks were strategically located by the landscape architect.

Maintenance Practices. The quality, care, and heart and soul of the landscape is evident by Sonatane, the landscape foreman, who lives in the community and who worked closely with the landscape architect. Proper landscape maintenance methods were

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An open view and connection to the neighboring residences were maintained. Photo credit: Dana Anne Yee, FASLA.

achieved with a one-year maintenance period. Working with the future staff and community helps to continue and ensure the future care of the gardens.

Whale Sculpture. Aunty Aggie, looked at the ocean and saw Koholā (Whale) as a symbol of knowledge, connection, and growth.

Nānākuli is now graced with a new home for a rich learning environment, with a backdrop of the grand Pu‘u Heleakala and the Wai‘anae mountains. It has a landscape of many native Hawaiian plants, culturally significant plants, and gardens of possibilities to inspire the youth of Nānākuli. The landscape architect shares in the pride of creating these gardens of wonder for the of Nānākuli community. Hopefully, the Kalaniho‘okahā Community Learning Center will shape a new generation of our youth for a great start in their future endeavors and happiness.

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By Dana Anne Yee, FASLA, LEED AP, ISA Certified Arborist, RA, UH Master Gardener, City Planner from the firm of Dana Anne Yee, Landscape Architect, LLC. Dana has been a presence in the Landscape Architectural profession and has a long-standing pattern of service to her profession and the community. Dana was honored as a Fellow with the American Society of Landscape Architecture in 2012. www.danaanneyee.com. The Dana Anne Yee Foundation, www.dayifoundation.org, is a 501(C)(3) non-profit corporation. The board of directors and members will continue in their commitment to serve and protect Hawai‘i’s delicate ecosystem and natural environment in their pursuit to help to preserve Hawai‘i’s beauty and to keep our Hawai‘i green.





PEOPLE, PLACES AND PARKS

by: Nancy Cassandro

Aerial View of restored lo'i and new pedestrian path with improved permeable paved parking lot in back. Photo Courtesy of ASLA Hawaii

Parks are places for people. Some parks are for people to engage in specific sports, some are for passive reflection, and some are for children to play and learn. Larger, regional parks often ask the natural environment to accommodate our human need to interact with nature. All types of parks, large and small, require planning and design that incorporates environmental and social sciences to find a balance where the park development can best serve both people and nature.

Landscape Architects provide planning and design services and often lead a team of consultants to find this best balance. The park planning process begins with background research, community outreach, and technical analysis of the physical site. The park design ultimately fulfills the needs of the community and recreational uses, while balancing natural, cultural, and historic resources and adheres to the guidelines of governmental codes and regulations.

Hawai'i has further sensitive considerations when designing public spaces and parks. The role of the Landscape Architect in planning and designing park spaces may include research and actions to prevent the introduction of invasive species, seek

protection of endangered species, promote the usage of native plants and conservation of sensitive cultural or historic sites. This may include seeking the consultation of scientific expertise to provide the best assessments or responses to environmental or cultural characteristics of a potential or existing park site. Hawai'i also has sensitive stream and coastal environments, requiring special attention to the management of storm water and soil erosion. These issues may occur on small neighborhood parks serving a local residential population and dynamic large regional parks that serve both our local population as well as the demands of the robust visitor industry. Landscape Architects and the consultant teams they assemble provide the planning and design for adequate facilities, open space, interpretive opportunities, parking and universal access appropriate to the intended usage of our valuable park spaces.

A great example of the services that Landscape Architects provide for park development is the Hā'ena State Park Master Plan, a recent Honor Award winner for Planning and Analysis at the 2021 ASLA Hawai'i Chapter Design Awards. In April of 2018, the devastating floods that impacted Kaua'i's North Shore created the necessity

for emergency repairs. It also opened the opportunity to finalize the Hā'ena State Park Master Plan and to implement key components such as a new shuttle drop-off, increased permeable parking areas, boardwalks, and storm water management. The 68-acre park Master Plan on the island of Kaua'i, led by PBR Hawai'i & Associates, followed the fundamental principles of planning and design development that produced a successful implementation of key elements of the Master Plan in a short period of time.

The Master Plan provided current surveys of flora, fauna, and wildland resources, cultural resources, marine resources, waste-water treatment, traffic and geological hazards. Being the location of the trailhead to the Kalalau Trail and the Nā Pali Coast State Wilderness Park, the Master Plan addresses the high impact of tourism to the community and the natural environment. The extensive community outreach to Hui Maka'āina o Makana, a local community non-profit that has been involved in restoring the lo'i complex, expanded the groups relationship with the Park and they continue a curatorship agreement with the State Parks.

Implementation of the Hā'ena State Park Master Plan included a new vehicular and



View of the restored lo'i with new path improvements and expanded invasive forest clearing. Photo Courtesy of ASLA Hawaii

shuttle service arrival and increased permeable paved parking areas. The parking area was also designed to give ADA access to a new pedestrian boardwalk that allows residents and tourists to safely engage with existing and renovated lo'i. Designed to serve both people and nature, the boardwalk engages the natural environment and safely provides access to Kee Beach through a tunnel of existing Hau Trees. The project development was through the State of Hawaii, Department of Land and Natural Resources, Division of State

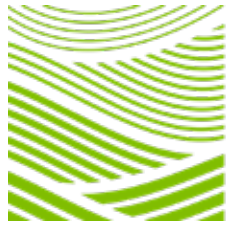
Parks. The Project Team with PBR Hawai'i included Hui Maka'āina o Makana and the Community Advisory Committee; Architect: Mason Architects, Inc.; Rockfall Engineer: Earth Tech/AECOM; Civil Engineer: Engineering Solutions; Biologist: Geometric Associates; Traffic Engineer: Austin Tsutsumi and Associates, Inc.; Cultural Impact Assessment: Kaimipono Consulting; Contractor: Earthworks Pacific, Inc.; Garden Island Tree Care; Kikiaola Construction.

To view this project and other 2021 ASLA Hawai'i Award winning projects visit <https://www.hawaii.asla.org/awards> And Join Us! World Landscape Architecture Month (WLAM) takes place during the month of April as we celebrate Landscape Architecture and the design of public and private spaces. Visit the ASLA Hawai'i Chapter Blog: www.hawaii.asla.org/blog

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Nancy Cassandro, PLA, ASLA, CLARB
Nancy is a Landscape Architect with Umemo-to Cassandro Design Corporation and is currently serving as Past-President of the Hawai'i Chapter of the American Society of Landscape Architects.



New Pedestrian Hau Tree tunnel which connects to Kee Beach
 Photo Courtesy of ASLA Hawaii



ASLA
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2021 ASLA Hawaii Design Award Winners

The American Society of Landscape Architects, Hawaii Chapter (ASLA Hawaii), announced the winners of the 2021 Design Awards in October, at their first ever Virtual Awards Gala. The Triennial Awards Program recognizes excellence in landscape architectural design.

General Design Award of Excellence: Punahou School Kosasa Grades 2-3 Neighborhood.

Landscape Architect: PBR Hawai'i and Assoc., Inc. **Landscape Contractor:** Progressive Landscaping, Inc.

General Design Honor Award: Kalaniho'okahā Community Learning Center – Nānākuli.

Landscape Architect: Dana Anne Yee, Landscape Architect, LLC.

Landscape Contractor: Island Landscaping and Maintenance, Inc.

General Design Merit Award: The Westin Nanea Ocean Villas, Ka'anapali.

Landscape Architect: Walters Kimura Motoda, Inc. **Landscape Contractor:** Resort Management Group, LLC.

General Design Merit Award: Administration and Allied Health Facility at the University of Hawai'i –

West O'ahu. **Landscape Architect:** Belt Collins Hawai'i, LLC. **Landscape Contractor:** Island Landscaping, Inc.

General Design Merit Award: Enhancement at the Royal Grove, Royal Hawai'ian Center.

Landscape Architect: Walters Kimura Motoda, Inc. **Landscape Contractor:** Takano Nakamura Landscaping.

Residential Merit Award: Pohinahina Residence. **Landscape Architect:** Loriann Gordon, LLC.

Landscape Contractor: Big Island Tropical Landscapes.

Residential Merit Award: Waialae Golf Course Residence.

Landscape Architect: HHF Planners. **Landscape Contractor:** Ultimate Innovations, Inc.

Residential Merit Award: Puako Beach Residence. **Landscape Architect:** Loriann Gordon, LLC.

Landscape Contractor: Big Island Tropical Landscapes.

Planning and Analysis Award of Excellence: South Shore Promenade and Coastal Open Space Network Study.

Landscape Architect: University of Hawai'i Community Design Center. Judith Stilgenbauer, et.al.

Planning and Analysis Honor Award: Hā'ena State Park Master Plan.

Landscape Architect: PBR Hawai'i and Associates, Inc. **Landscape Contractor:** Earthworks Pacific, Inc.; Garden Isle Tree Care; Kikiaola Construction.

Research Honor Award: Lake Wilson - Wahiawā Freshwater State Park.

Landscape Architect: University of Hawai'i Community Design Center, Judith Stilgenbauer, et.al.

Communication Honor Award: "Our Stories of the History of Landscape Architecture in Hawai'i – Chapter II".

Landscape Architect: Dana Anne Yee, Landscape Architect, LLC. **Media:** Landscape Hawaii Magazine, LICH.

ASLA Hawaii Student Design Awards: A total of 7 awards were given to the students of the Master of Landscape Architecture program at the UH Manoa School of Architecture.

3 Student Honor Awards and 4 Student Merit Awards were presented.

View the 2021 Design Awards videos at: <https://www.hawaiiasla.org/awards>



Mahalo and aloha to our extraordinary City Landscape Architect, Dave Kumasaka

By: Nathan "Nate" Serota

(From left to right) Division of Urban Forestry staff Dave Kumasaka, Stan Oka, and Brandon Au at the blessing of the Japanese Garden fronting Honolulu Hale, designed by Dave, in April 2019.)

Growing up in the era of Michael Jordan, it was easy to recognize the shared qualities of those who are at the top of their game: persistent practice, a self-motivated drive for excellence, and making the difficult look easy.

The City and County of Honolulu was blessed to employ one of these all-stars. Instead of triple doubles and championships, this civil servant designed beautiful, pragmatic, and sustainable landscapes that have often been referred to as garden masterpieces.

Serving in the Department of Parks and Recreation for 30 years, the majority of which was spent in the Division of Urban Forestry (DUF), David "Dave" Kumasaka was a vital component of O'ahu's green infrastructure as one of only two in-house Landscape Architects working for the City. He was truly a pillar of DUF, having reviewed thousands of plans, advocated for the protection of trees in development projects, while designing hundreds of planting layouts across the island.

Most of you may be familiar with the creativity, vision, horticultural wisdom, and flexibility that go into creating a comprehensive landscape design (we'll provide some excellent examples of his

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work momentarily). On top of that demanding duty, Dave was also responsible for reviewing and commenting on project plans submitted to DUF by a plethora government, private, independent, and non-profit agencies. These reviews can often be the final say on how an area will look and grow for several generations, requiring careful attention to detail, a lengthy time commitment, and intellectual energy. No matter what his workload demanded of him, Dave never cut corners and provided detailed and deliberate remarks for every bit of work that crossed his desk.

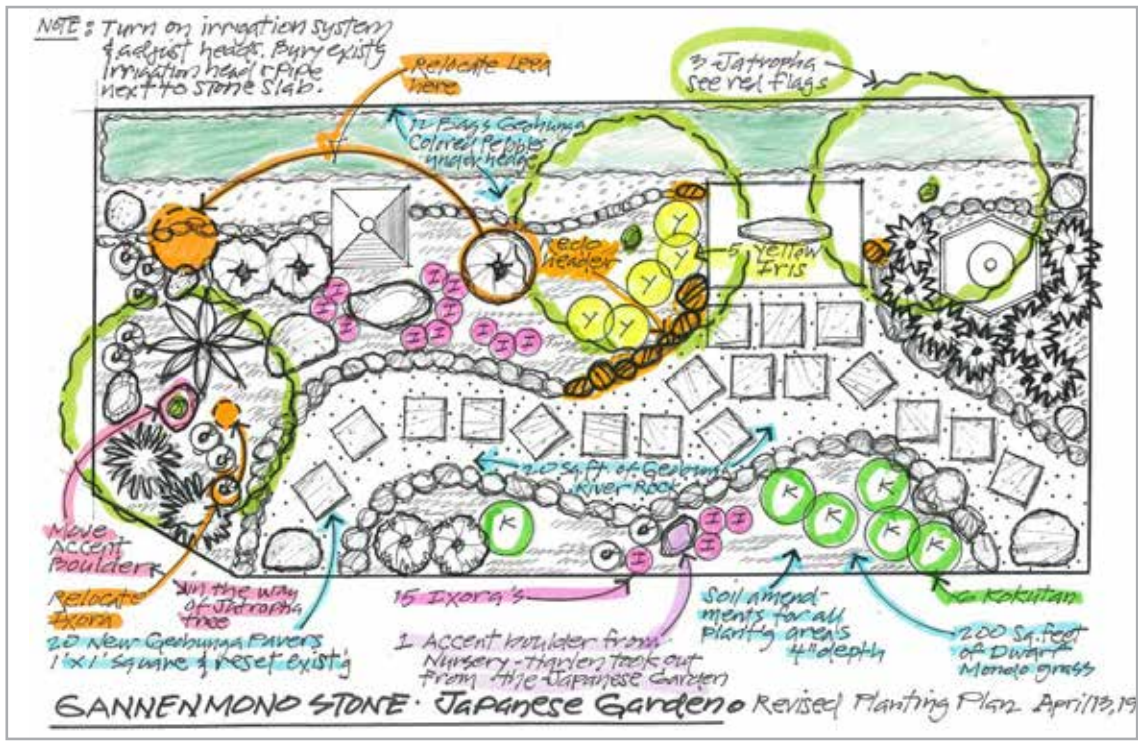
In addition to his review efforts to ensure landscapes around O'ahu will best serve our community for decades to come, Dave constantly developed and revised existing guidelines, standards, and procedures to encourage consistency and excellence throughout the many City departments and agencies.

These extra-curricular efforts and Dave's skilled craftsmanship are best personified in three of his most recent landscape design efforts. The first is a well-known area of respite for the Kapahulu and Waikiki communities; the revitalized Queen Kapi'olani Garden on the corner of Paki and Monsaratt avenues opposite of the Honolulu Zoo. Once the site of the Queen's Rose Garden and a Hibiscus Garden, this area now boasts a dynamic display of native Hawaiian species ranging from Alahe'e to Hō'awa. Not only is this a thriving example of native propagation efforts, this space is a popular walking and picnicking area for the community and serves as a living laboratory for DUF staff, who use this area to teach numerous keiki the importance of caring for our environment and urban forests. These latest phases incorporating the Native Hawaiian species, and enabling these practical elements to be enjoyed by various groups, were designed by Dave.

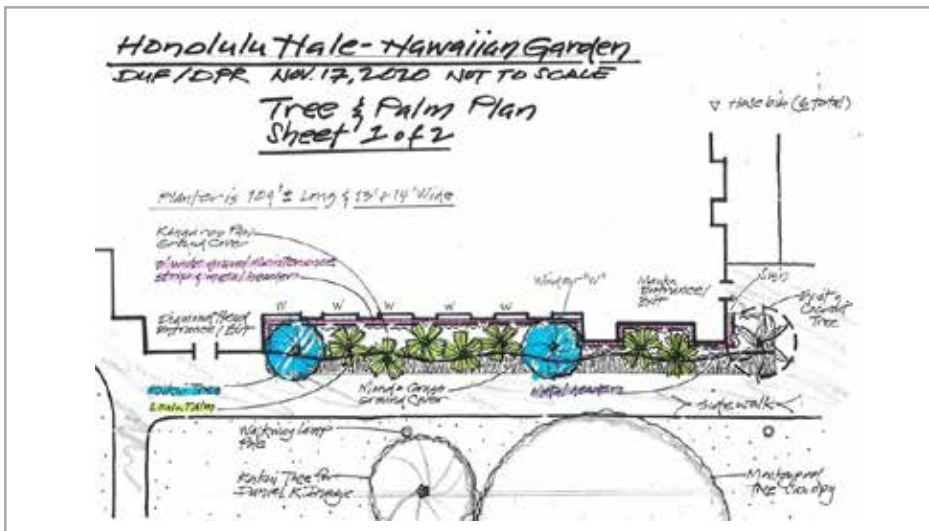
His final *pièces de résistance* are both a true source of pride for DUF and are both located around Honolulu Hale. Together they are a testament of incorporating design, cultural significance, and future planning into account when creating landscapes. In the front of this museum-esque City Hall is a Japanese Garden dedicated to the 150th anniversary of the Gannenmono (the first Japanese immigrants to arrive in Hawai'i). This landscape expertly



Top: Dave and former Honolulu Botanical Garden Director Winnie Singeo. Bottom: Keiki volunteers help to realize Dave's new phase of Queen Kapi'olani Garden, with Dave assisting on the left



Top to bottom: Aerial view and ground level rendering of the landscape design created by Dave for the Japanese Garden fronting Honolulu Hale. His vision came to life as seen in the accompanying picture of the completed garden, which as you can see incorporates numerous significant elements to honor the 150th Anniversary of the Gannenmono.



Top to bottom: Landscape design by Dave and the finished Hawaiian Garden on the Diamond Head-side of Honolulu Hale. This garden replaced the previously cluttered landscape in that area with native plants in December 2020, all in honor of those who perished due to the COVID-19 pandemic. Dave's landscape designs around Honolulu Hale and O'ahu were celebrated by many VIPs including during the Hawaiian Garden's blessing (from left to right) Mayor Emeritus Kirk Caldwell, Managing Director Emeritus Roy Amemiya, Mayor's Office of Culture and the Arts Executive Director Emeritus Misty Kela'i, Council Chair Emeritus Ron Menor, Department of Emergency Management Director Hiro Toiya, Brandon Au with the Division of Urban Forestry and Kahu Kordell Kekoa.)

integrates several natural and culturally significant elements including: a 5-foot long inscribed time capsule, a stone lantern & pagoda, three Jatropha trees, six Kokutan plants, five yellow Iris plants, Dwarf Mondo grass, 15 Ixora plants, pavers, pebbles, and pathways all in a confined and highly trafficked area.

On the Diamond Head-side of the hale is his most recent designed landscape, a Hawaiian Garden dedicated to honor and remember those who suffered and perished during the COVID-19 pandemic. This special project has already grown to perfectly complement this area, which was once occupied by invasive and non-native plant species, and is now accentuated with: two Kukui trees, seven Loulu Palms, and Laua'e (Kangaroo Paw) ground cover.

Comparing the schematics for both of these gardens with the final product truly depicts the simple yet elegant precision Dave utilized to create pragmatic landscapes that grow with their surrounding environment. His efforts to increase efficiency and his dedication to perpetually producing quality work have undoubtedly saved hundreds of thousands if not millions of dollars in taxpayer funds over his three decades of civil service. Our motto in DPR is "we add quality to life," and without a doubt the beautiful landscapes Dave has crafted, revised, and encouraged throughout the island will add quality to lives of generations of O'ahu residents and visitors. We extend our fondest mahalo to Dave for being the Michael Jordan of Landscape Architects, as he begins this new chapter of his illustrious career following decades of excellence with DUF and the City. A hui hou Dave!

Nathan "Nate" Serota is the spokesman for the Honolulu Department of Parks & Recreation and former Emmy Award-winning videojournalist with KITV News.

Hawai'i Celebrates Arbor Day

By Carol Kwan



A Navy Hale Keiki School student receives the Arbor Day proclamation from Mayor Rick Blangiardi. Photo courtesy of Honolulu Dept. of Parks and Recreation.



Top and Bottom: Mulching the Rainbow Shower Tree. Photos courtesy of Honolulu Dept. of Parks and Recreation.



Proud new owner showing off his native 'ākia (*Wikstroemia uva-ursi*) and Certificate of Adoption from the Trees for Kaimuki Arbor Day Tree Giveaway event. Photo courtesy of Smart Trees Pacific.



Happy new owner of a henna tree (*Lawsonia inermis*) from the Trees for Kaimuki Arbor Day Tree Giveaway event. Photo courtesy of Smart Trees Pacific.

Arbor Day was November 5, 2021. The City and County of Honolulu celebrated at Connie Chun Aliamanu Neighborhood Park in the Foster Village/Salt Lake area. Mayor Rick Blangiardi and Councilmember Radiant Cordero were joined by keiki and teachers from Navy Hale Keiki School and City staff from the Honolulu Department of Parks and Recreation and Office of Climate Change, Sustainability and Resiliency as they planted five new trees: three silver trumpet (*Tabebuia aurea*) and two Nii Gold rainbow shower trees (*Cassia x nealae* 'Nii Gold'). "Planting trees has a significant impact on neutralizing our carbon footprint and helps combat the negative effects of climate change. Looking long range, planting a tree is one of the best things we can do to profoundly benefit future generations," said Mayor Blangiardi. "It's especially important to get our keiki involved in this process, so the kids can grow along with the trees and have an innate appreciation for the many environmental, economic, and psychological benefits trees provide. We applaud all of the efforts to increase our community forests as Arbor Day is celebrated throughout the state."

The City and County of Honolulu has celebrated Arbor Day for 116 years and has been certified by the Arbor Day Foundation as a Tree City U.S.A. for 40 years.

Tree Giveaways

Thousands of trees were adopted by new owners on Saturday, November 6, 2021, in honor of Arbor Day, courtesy of the Kaulunani Urban and Community Forestry Program through partnerships on O'ahu with the Mālama Learning Center, Trees for Honolulu's Future, Ke Kula Nui O Waimānalo, Smart Trees Pacific; on Maui with the Maui Nui Botanical Gardens; and on Kaua'i with the Garden Island Resource Conservation and Development, Inc. Kaulunani is under the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW), with funding from the USDA Forest Service.

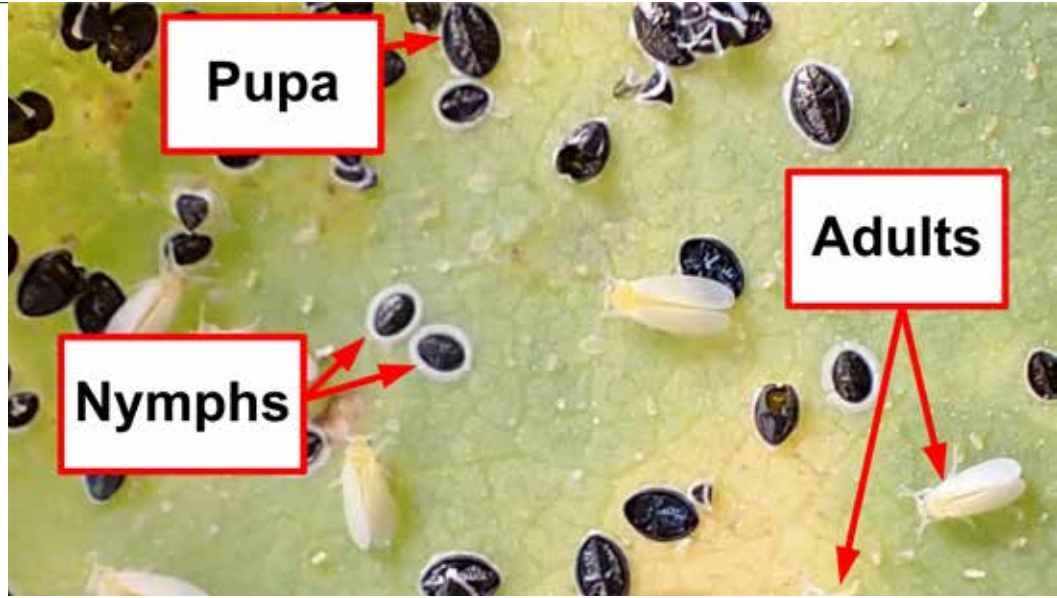
TreeCircus visits Maui and Big Island schools virtually

Maui Green & Beautiful partnered with Western Chapter International Society of Arboriculture (WCISA) to bring TreeCircus to Hawaii for Arbor Day 2021. Due to the uncertainty surrounding COVID 19 travel restrictions, TreeCircus was held virtually with Kula Elementary School and Independent Hawaiian Immersion Elementary from Maui and Volcano School from the Big Island. Volcano School was especially eager to host TreeCircus, signing up in March for the November event. Timmy Womick did a great job, adapting to the digital format and getting the students excited about what trees give us.



PEST COLUMN

BY: CAROL KWAN



Various life stages of acacia whitefly on lower leaf surface. Photo courtesy of HDOA.



Top: Nymphs and pupae on Rainbow Shower Tree leaves' lower surfaces.

Bottom: Rainbow Shower Tree foliage infested with acacia whitefly showing leaf yellowing. Photos courtesy of HDOA.

ACACIA WHITEFLY

There's a new pest in town – Acacia whitefly (*Tetraleurodes acaciae*). It was first found in Waikiki with subsequent sightings throughout Honolulu. It appears to be widespread across Oahu.

Acacia whitefly infestations may cause leaf yellowing, wilting, and decreased plant vigor. Heavy infestations may cause defoliation. Whitefly feeding may also produce copious amounts of honeydew that may lead to sooty mold.

The Acacia whitefly nymphs and pupae are shiny black with a fringe of white wax. They range in size from 0.1 mm to 0.7 mm, so they're tiny. Magnification is recommended for confirming identification.

This pest prefers hosts within the Fabaceae family (Legumes). So far in Hawaii, it has been found on shower trees (*Cassia sp.*) and Erythrina species. Potential hosts include some of our native species, particularly Koa (*Acacia koa*), Wiliwili (*Erythrina sandwicensis*), and Uhiuhi (*Mezoneuron kavaiensis*). Other common landscape plants that are potential hosts are *Bauhinia*, *Bougainvillea*, *Melaleuca*, *Jatropha*, *Chamaedorea*, and *Pseudobombax*.

A parasitoid wasp and several ladybeetle predators have been found attacking Acacia whitefly, but in low numbers so far.

If you discover Acacia whitefly on a Neighbor Island, please notify (808) 643-PEST or 643pest.org. For those on Oahu, if you find it on host species other than shower trees or Erythrina species, please report that as well through the website. It helps greatly if you submit several clear photos with your report along with the host plant species and location for further investigation.

For more information, please refer to the State of Hawaii Department of Agriculture's New Pest Advisory at: hdoa.hawaii.gov/pi/files/2021/12/NPA-21-02-Tetraleurodes-acaciae.pdf.

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Carol Kwan is the President of Carol Kwan Consulting, a Certified Arborist, and Treasurer of Aloha Arborist Association.

Mahalo to Janis Matsunaga, Hawaii Department of Agriculture Plant Pest Control Branch, for reviewing this article.



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